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4 PROGRAMMATIC DEIS SEISMIC SURVEYS  
5 IN THE BEAUFORT AND CHUKCHI SEAS  
6 PUBLIC HEARING/MEETING

7 Barrow, Alaska  
8 Taken April 26, 2007  
9 Commencing at 7:30 p.m.

10 Volume I - Pages 1 - 103, inclusive

11 Taken at  
12 North Slope Borough Council Assembly Chambers  
13 Barrow, Alaska  
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21 Reported by:  
22 Mary A. Vavrik, RMR  
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1                           A-P-P-E-A-R-A-N-C-E-S  
2                   Albert Barros  
                  Community Liaison  
3                   Minerals Management Service  
4                   Bruce M. Herman  
                  Geophysicist  
5                   Minerals Management Service  
6                   Ken Hollingshead  
                  Fisheries Biologist  
7                   National Marine Fisheries Service  
8

Taken by:

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                  Mary A. Vavrik, RMR

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11       BE IT KNOWN that the aforementioned proceedings were taken  
12       at the time and place duly noted on the title page, before  
13       Mary A. Vavrik, Registered Merit Reporter and Notary  
14       Public within and for the State of Alaska.  
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1 P-R-O-C-E-E-D-I-N-G-S

2 MR. KEN HOLLINGSHEAD: Good evening. I'm  
3 Ken Hollingshead. I am with the National Marine Fisheries  
4 Service, a part of the National Oceanic and Atmospheric  
5 Administration, or NOAA, and we are here tonight to take  
6 testimony and comments and answer questions on a draft  
7 environmental impact statement that was prepared over this  
8 past winter and spring by the National Marine Fisheries  
9 Service and the Minerals Management Service on conducting  
10 seismic surveys in the Beaufort and Chukchi Seas.

11 Tonight I am accompanied by Albert Barros --  
12 temporarily stepped out -- community affairs liaison for  
13 Minerals Management Service in Anchorage; Bruce Herman,  
14 who is a geophysicist and who will be our subject matter  
15 expert for questions regarding seismic. And we have as a  
16 court reporter, which will take our testimony tonight and  
17 the comments expressed, Mary Vavrik. And we have our  
18 interpreter tonight, Rosabelle Rexford from town, from  
19 Barrow here. Excuse me.

20 Before we get into our proceedings tonight, we have  
21 asked Rosabelle for -- to give us the blessing. Could we  
22 all stand, please.

23 (Blessing offered in Inupiat by Rosabelle  
24 Rexford.)

25 MR. KEN HOLLINGSHEAD: First thing I want

1 to do is to apologize to the people here. We tried to get  
2 in for a public meeting, public hearing here last week but  
3 got weathered in in Nuiqsut and were unable to make the  
4 journey. We got in here later the next day, but we were  
5 unable to have any meetings at that time. So we are here  
6 tonight, and we are very happy to see everybody in  
7 attendance.

8 This is the final meeting that we are having. We  
9 have met in Kaktovik, Nuiqsut, Point Lay, Point Hope, and  
10 Wainwright. And now this will be -- we're here in Barrow.  
11 Before we get going -- before we get started in taking the  
12 public testimony, I'm going to try to explain some of  
13 what's going on.

14 I would like to ask George if he has any words from  
15 the mayor or would like to have anything at this time.

16 MR. GEORGE OLEMAUN: I would rather hear  
17 from -- thank you. My name is George Olemaun. I'm the  
18 North Slope Borough Mayor Edward Itta CAO, and I welcome  
19 you. But I do have to comment, the mayor's comment. You  
20 go ahead with your presentation. I guess when your  
21 comment period starts, then I can start with the mayor's  
22 thoughts.

23 MR. KEN HOLLINGSHEAD: Do you want to do  
24 that now or wait until --

25 MR. GEORGE OLEMAUN: Wait until you are

1       ready. I want to hear what you have to say first.

2                       MR. KEN HOLLINGSHEAD: You want to hear me  
3       first. Okay. That's fine. Hopefully I'm not going to  
4       jump around too much, but essentially the environmental  
5       impact statement was mailed out to interested parties that  
6       we had. We had a mailing list that had been obtained from  
7       previous environmental impact statements, and I personally  
8       hand-carried and boxed them up to the post office on March  
9       22nd trying to get them up to the Alaska communities.  
10      With weekend travel, they were all mailed by priority  
11      mail, so I did the best I could to get them up here as  
12      quickly as possible. We are still trying to figure out  
13      where some of the copies went to. Apparently some people  
14      did not get their copies.

15              The comment period is formally open now, between now  
16      and May 14th, and there are two methods of submitting  
17      comments. One is tonight through testimony, statements  
18      made, and if you have written documents, to leave them  
19      with us. The court reporter will take down verbatim  
20      statements that you make. The second, and not precluding  
21      the first, would be to submit written comments. We have  
22      forms here, but we have no -- there is no requirement that  
23      you use the form. It's just mainly for the convenience of  
24      people who just wish to have everything all formal and  
25      just put a stamp on it. You can submit comments with the

1 letterhead of your organization or your own personal  
2 letterhead.

3 We also take e-mail comments. The mailing address is  
4 PR1.alaska -- make sure I don't get this wrong --  
5 alaskapeis@noaa.gov. And that's a special mailbox that we  
6 have established just for this environmental impact  
7 statement. For those that want to, check with me later  
8 just to make sure I got all the letters right in the  
9 Alaska PEIS stage.

10 Give a little bit of a background as to what has  
11 proceeded so far. In late 2005 the Minerals Management  
12 Service received word from the oil industry that they were  
13 renewing interest in conducting seismic operations in the  
14 Chukchi and Beaufort Seas in 2006, so the Minerals  
15 Management Service, before they could issue the proper  
16 permits for that activity, needed to meet the requirements  
17 of the National Environmental Policy Act. Minerals  
18 Management Service prepared a programmatic environmental  
19 assessment. National Marine Fisheries Service was a  
20 cooperating agency in the preparation of that  
21 environmental assessment.

22 That document went out in the summer of -- early  
23 summer of 2006, and it was used for authorizations and  
24 permits for three companies to conduct seismic operations  
25 in the Beaufort and Chukchi Seas. Shell Oil conducted

1 seismic surveys in the Chukchi Sea. They had plans to  
2 operate in the Beaufort Sea but did not operate there.  
3 ConocoPhillips operated in the Chukchi Sea. And GX  
4 Technology of Houston, Texas operated in the Canadian  
5 Beaufort Sea and in the Chukchi Sea. The last operation  
6 was GXT. They stopped their seismic surveys, I believe it  
7 was, on November 11th of 2006.

8 The Minerals Management Service also received --  
9 excuse me. The environmental assessment investigated or  
10 analyzed the potential impacts for four surveys,  
11 consecutive seismic surveys, in the Chukchi Sea and four  
12 seismic surveys in the Beaufort Sea. What that would have  
13 meant would have been eight seismic boats in both oceans  
14 in 2006. As I mentioned, there were three operations  
15 going, so we did not reach that level of impact, but there  
16 were still indications to Minerals Management Service that  
17 there was even a greater interest in conducting seismic  
18 surveys in 2007, and more companies with strange letters,  
19 letter combinations, from areas in Texas, mostly Houston,  
20 but other oil area companies wanted to conduct seismic  
21 surveys.

22 So Minerals Management Service and National Marine  
23 Fisheries Service determined that the analysis needed for  
24 that -- for a level of activity as great or higher than  
25 the four and four that we were looking at, we really would

1     like to investigate or to analyze that under a full  
2     environmental impact statement.

3             So an environmental assessment is a document required  
4     by NEPA to make a determination if you are going to need  
5     an environmental impact statement. That was the road that  
6     we took. So we did an EA first, and now we are doing an  
7     environmental impact statement.

8             It turns out, however, that when we started this in,  
9     I believe, October of 2006 and over the course of several  
10    months, culminating in the meeting earlier in April, these  
11    other companies have all stated that they will not be  
12    conducting work in 2007. GX Technology is only going to  
13    work in the Canadian Beaufort Sea. ConocoPhillips has  
14    teamed -- if that's the correct term -- with Shell for  
15    data sharing on Shell's vessel, and that's leaving only  
16    Shell Oil to propose to conduct surveys in the Chukchi and  
17    Beaufort Seas. So that's where we are right now.

18            We have a draft environmental impact statement out.  
19    We are accepting public comment. This hearing tonight is  
20    for the -- conducting seismic surveys. It is not --  
21    really for discussion of other environmental impact  
22    statements that, I guess, some people think they are  
23    coming out fast and furious on the communities up here,  
24    but this one is what I call a telescoping environmental  
25    impact statement; in other words, it takes a segment of



1        lease sale environmental impact statements and takes a  
2        good, close look at that activity, as opposed to when you  
3        have an EIS for lease sales, you have to look at many  
4        different aspects of a lease sale. So this is just one  
5        document to look at one aspect of the entire offshore  
6        leasing program.

7           During the course of the evening, I will get into  
8       certain aspects of it and I'll answer questions. The  
9       proposal that -- what we are looking at this year now, as  
10      I mentioned, is we expect that under the Marine Mammal  
11      Protection Act, National Marine Fisheries Service will be  
12      processing a single company's application for conducting  
13      seismic. That's from Shell to conduct its deep seismic in  
14      the Chukchi Sea, a deep seismic operation in the Beaufort  
15      Sea, and it will also include a shallow hazards operation  
16      in the Beaufort Sea.

17           On another aspect of it that's not subject to  
18           tonight's public hearing, we have out for public comment  
19           Shell's application for conducting two drilling operations  
20           in the Beaufort Sea. That is out, and I think the comment  
21           period closes on May 10th or so on that one.

22           Based on what I've said so far, are there questions  
23       that people have? Before you start, could you say your  
24       name for the record.

25 MS. LAYLA HUGHES: Yes. My name is Layla

1       Hughes. So my question is, it sounds like your  
2       understanding is that this EIS does cover shallow or what  
3       they sometimes call high resolution seismic testing in the  
4       Beaufort, and therefore, will it be necessary for the  
5       final EIS to be complete before Shell can get an  
6       IHA permitting high resolution seismic activity on lease  
7       activity?

8                       MR. KEN HOLLINGSHEAD: This -- this  
9       environmental impact statement covers all aspects,  
10      everything from regular seismic surveys to ocean bottom  
11      cables, and it covers all aspects. And I believe, but  
12      can't be sure, that we do not have something -- another  
13      document that would -- that could cover that. So we would  
14      like to have this document out in order for us to evaluate  
15      the impacts of the -- of Shell's -- of Shell's shallow  
16      hazards seismic survey. But we do have other documents  
17      that are out. The programmatic environmental assessment  
18      was issued last year. So we do have other documents. But  
19      that is a decision that has not been made.

20             My goal is to get this environmental impact statement  
21      completed this year so that it can be used as a proper  
22      document for issuing or processing a -- the incidental  
23      harassment authorization for Shell's seismic application  
24      that they have submitted.

25                    MS. LAYLA HUGHES: Including high

1 resolution activity?

2 MR. KEN HOLLINGSHEAD: Including high  
3 resolution, yes.

4 MS. LAYLA HUGHES: So when you make the  
5 reference to the PEA from last year, are you suggesting  
6 that it's possible that that document could support high  
7 resolution seismic activity this year even though by its  
8 terms it was an analysis for the 20006 activities?

9 MR. KEN HOLLINGSHEAD: Well, it was for  
10 the analysis of 2006, which was four and four. In 2007 we  
11 have only a single -- a single operation. So we are  
12 looking at the possibility that -- the potential of, you  
13 know, what NEPA alternatives are available to us. I  
14 cannot commit to say one or the other at this time.  
15 That's a decision that our NEPA -- our NEPA people have to  
16 make.

17 MR. ROBERT SUYDAM: Robert Suydam. Once  
18 this EIS is finalized, how long is it good for? How long  
19 can it remain in effect until it needs to be modified or  
20 adjusted?

21 MR. KEN HOLLINGSHEAD: NEPA documents  
22 remain in force or remain effective until they are  
23 overtaken by events, the old term, essentially when they  
24 are -- when you exceed the analysis or when you get  
25 significant new data that could cause you to have to

1 reanalyze your NEPA statements. For example, if this was  
2 seismic outside where we have -- with potential for  
3 strandings, if a significant marine mammal stranding event  
4 coincided with it, you would certainly have to reanalyze  
5 that either through a new environmental impact statement  
6 or a supplemental to that environmental impact statement.  
7 So what we were looking at, I think there was mention made  
8 at one time in one of my documents that we are looking for  
9 this for at least a five-year period.

10 To give you a little bit of information of what's  
11 contained in the environmental impact statement, similar  
12 to the programmatic environmental assessment that was done  
13 in 2006, we looked at a -- two major alternatives. One is  
14 to not issue permits by the Minerals Management Service  
15 and not issue incidental harassment authorizations by the  
16 National Marine Fisheries Service.

17 The proposed action was the issuance of these  
18 permits, and then there are other alternatives under that  
19 proposed action that analyzed the impacts from different  
20 suites of mitigation measures. Most of it is -- deals  
21 with how -- what could happen under different mitigation  
22 measures. Most of them deal, discuss various decibel  
23 levels. Decibel is a hearing level for underwater sound.

24 We have information that has been obtained previously  
25 in the Beaufort Sea and in other areas. Essentially 180

1       decibels is a sound that was chosen by scientists to be a  
2       precautionary area for not causing a hearing injury. This  
3       is a temporary threshold shift which is similar to if you  
4       go to a football -- one of the modern football games or  
5       other events that have the exploding scoreboards, et  
6       cetera, or you go to rock concerts, et cetera, you don't  
7       hear quite as well when you come out. That's a reaction  
8       of your ear to protect it from an injury. But the  
9       scientists said we don't know where above that level an  
10      ear injury could occur, so we have set that level -- that  
11      level was set at 180 decibels as an underwater sound  
12      reference for cetaceans, including bowhead whales, and 190  
13      decibels for pinnipeds. That was done at a follow-up  
14      workshop.

15             Then we had a level for mitigation, which means  
16      protecting, having a safety zone for 160 decibels. 160  
17      decibels is where scientists found a behavioral reaction  
18      from gray whales to a low frequency seismic sound when it  
19      was in their migratory path in Southern California. So  
20      that became a standard. Back when we had no -- we had no  
21      additional information, that became a standard for where  
22      marine mammals would react if it's in their hearing area  
23      to a marine mammal sound. That certainly is very general.

24             Dolphins are not going to react at that level if it's  
25      a low frequency sound. They may react at that level if

1     it's a mid frequency sound, depending on their best  
2     hearing potential.

3             Based on information collected by LGL under  
4     WesternGeco permits in the '90s, a level was set in the  
5     programmatic environmental assessment and continued in the  
6     EIS that set a level for 120 decibels. What they found,  
7     the scientists found, was that at 120 decibels in the  
8     Beaufort Sea, luckily it was a complete exclusion -- an  
9     exclusion zone around the seismic source. This was very  
10    rough because in the Beaufort Sea, which may be different  
11    from what's in the Chukchi Sea, but in the Beaufort Sea,  
12    they were reacting at a level somewhere between 20  
13    kilometers and 35 kilometers. And at workshops we decided  
14    that there was a 20 kilometer area of exclusion.

15            The seismic air guns that we used for that test were  
16    quite a bit smaller than the seismic air guns right now,  
17    so we couldn't just say 20 kilometers. That would not  
18    afford sufficient protection for the animals. So we went  
19    with 120 DB safety zone.

20            And based on what we had in the programmatic  
21    environmental assessment for ensuring that there was not a  
22    significant impact under NEPA which would allow us to  
23    complete a finding of no significant impact -- that's  
24    getting kind of technical, and I can get into it more if  
25    you have questions on it, but we found that 120 decibels

1        was necessary -- a safety zone would be monitored for that  
2        120 decibels to protect the sensitive female cow/calf --  
3        bowhead cow/calf pairs that were in the western migration  
4        out of the Beaufort and Chukchi Seas. And we would also  
5        have a 160, the decibel level I mentioned previously, for  
6        feeding concentrations of gray whales and bowhead whales  
7        that were in the Chukchi or the Beaufort Seas.

8           So essentially that mitigation was one of the  
9       critical components of the programmatic environmental  
10      assessment and has been continued in the programmatic  
11      environmental impact statement.

12           There are other mitigation measures which are  
13           standard, including a shutdown or a power down if a marine  
14           mammal comes within the 180, 190 decibel zone; ramp up so  
15           that the animal is not exposed to a very loud immediate  
16           sound; pre-ramp-up observations by trained marine mammal  
17           observers and Inupiat observers; and additional mitigation  
18           and monitoring measures.

19           If I continue talking all night, I'm going to lose my  
20    voice. I can feel it already.

21           So with that, that's a bit of a summary of that and I  
22       think at this time I'd like to ask, in order to have my  
23       voice last for the evening, if George could make some  
24       remarks, make some comments.

25 MR. GEORGE OLEMAUN: Thank you. Along

1 with what you stated on the noise, you are measuring where  
2 the noise or whatever, the seismic, what you see, but you  
3 don't measure what you don't see. And I'm referring to  
4 the microbes, which we had a talk about here a couple days  
5 ago where you don't see them. They are the ones that all  
6 the planktons feed on them, which in turn all the other  
7 mammals feed on that. And those are the ones that I don't  
8 know if you have ever had a chance to determine if -- how  
9 the seismic affects them because you can't see them. The  
10 only time you can see them under a microscope and find  
11 out -- if you take a cup and take it under a microscope  
12 and you see them, it's another universe. So everywhere on  
13 the ocean.

14 So a couple days ago we had a -- just someone talked  
15 about -- scientist about those microbes. That's one thing  
16 that I don't know if you are aware of or if it's something  
17 that needs to be determined since they are the bottom of  
18 the food chain, in a sense. I just want to comment on  
19 that.

20 But before I go any further, my name is George  
21 Olemaun. You had an EIS, which you had a deadline of May  
22 14th, which is our busiest time of the year. We are  
23 whaling. We have got spring subsistence, and people will  
24 not worry about a date. And I'm wondering if there is a  
25 way or recommend or saying to you from the mayor's office



1 or from -- if it can be extended a month till June. I  
2 just wanted to start off with that, for the comment period  
3 on the EIS, if that's possible so that people can have  
4 time to --

5 You said you mailed the stuff. I don't know about  
6 who is on the list, but I don't have it. But from the  
7 last meeting you had, that was last year. Was that -- MMS  
8 was here. Albert and them were here. They were at the  
9 Heritage Center. But I don't know if you got the list  
10 from that to mail out the EIS report, but I haven't  
11 received mine. So I'm sure if you are saying that -- the  
12 way things are here now with them bypassing the mail, you  
13 never know when you are going to get it. So I'm just  
14 saying that as a courtesy or just so the people have time  
15 to determine or read the EIS, then I would recommend that  
16 you extend it a month. I just want to state that.

17 With that, I do have the mayor's comments, and I do  
18 have some copies here. But before I start that, with  
19 that, I just want to state something here from when all  
20 this started. And this is January 21, 1976. "Thomas  
21 Napageak...was protesting Union Oil's plans to drill the  
22 first well in offshore Arctic waters. Napageak called  
23 upon ASRC and the borough for support." I just wanted to  
24 note the date: '76. So that was 30 years ago. And we  
25 have been at it for 30 years. And hopefully we won't have

1 to for another 30 years, but I just wanted to bring it out  
2 on the fact that it had -- you know, we have been  
3 presenting our arguments to MMS and whomever, especially  
4 on offshore. But with that, I just want to go to the  
5 mayor's comments.

6 Good evening. I'm George Olemaun, Chief  
7 Administrative Officer with North Slope Borough and I will  
8 be delivering comments on behalf of Mayor Itta, as he is  
9 out of town today. He regrets not being able to testify  
10 in person because of the importance of the issue of  
11 seismic surveys in our area.

12 To begin, I want to welcome all of you. We have had  
13 different names. I think you have changed a couple or --  
14 I don't believe James Bennett is here, right? So I just  
15 want to welcome all of you of the National Marine Service  
16 to Barrow and the Minerals Management Service. We are  
17 always pleased when people come here to learn more about  
18 life in the Arctic and our concerns for the animals and  
19 their habitat. We are also grateful for a chance to  
20 comment on plans for oil and gas activities, especially  
21 when those plans are for the offshore areas.

22 For decades now we have repeatedly given comments to  
23 our federal government and voiced our opposition to  
24 offshore oil and gas activities. And I refer back to the  
25 first comment I said, '76. Also, repeatedly our federal

1 government has ignored us. Our federal government has  
2 allowed and even encouraged oil and gas activities in the  
3 offshore areas of northern Alaska, despite our opposition.  
4 This opposition has not only come from the North Slope,  
5 but also from the Alaska Eskimo Whaling Commission, the  
6 village Whaling Captains Association, and virtually every  
7 North Slope resident who has testified at public hearings.

8 I don't have to tell you how discouraging this is.  
9 Our community is united in opposition to offshore oil and  
10 gas activity, yet the federal government does not listen  
11 to us. Instead, they push ahead with permitting large  
12 multinational oil companies who destruct our way of life  
13 by impacting the marine resources that are important to  
14 the residents of the North Slope Borough. Despite being  
15 discouraged by how little our federal government listens  
16 to us, we continue to come out and testify in the hope  
17 that at some point we will be taken seriously. We know  
18 what is going on in our waters and we know what is at  
19 stake.

20 As you know, we have plenty of concerns about  
21 industrial activity in the offshore areas. The North  
22 Slope Borough always has been and currently is and in the  
23 future will be opposed to offshore industrial activity.  
24 There is a reason for this continuity. It tells you how  
25 deeply we feel about protecting the migratory paths of the

1 bowhead and other marine mammals that our people depend  
2 on.

3 If exploration and development could be done without  
4 disrupting the whales or other animals, then we would  
5 support OCS activity just like we support most onshore  
6 development. But industrial activity in the ocean, the  
7 seismic work, and the ship traffic and construction and  
8 operation of wells, it all makes a lot of noise, and that  
9 noise carries through the water. The bowheads hear it and  
10 it changes their normal patterns of travel and feeding.  
11 Because of impacts to whales and other marine mammals, our  
12 hunters have a more difficult and dangerous job hunting  
13 these important resources. And that has happened more  
14 than once. I'm sure you are aware of that.

15 Our other major concern, as we have said repeatedly,  
16 is the risk of an oil spill. Even though we are talking  
17 about seismic activity tonight, there is risk of an oil  
18 spill.

19 Seismic vessels carry fuel. They also refuel during  
20 the course of a season, and exploration often leads to  
21 development. Therefore, even though we are talking about  
22 seismic, there is risk from spilled oil. If there is an  
23 oil spill, what happens when that stuff gets loose in the  
24 ocean? How far does it spread? How much damage does it  
25 do to the bowhead's feeding grounds? And how do these

1       toxins affect the health of the bowhead and the Inupiat  
2       who eat them? How will the spilled oil affect the birds,  
3       fish, and marine mammals or the food these mammals must  
4       have to sustain themselves? Again, it's in regard to the  
5       microbes and the planktons.

6               We know that oil spill cleanup uses primitive  
7       technologies with very questionable rates of success.  
8       There is no technology to clean up a spill in the broken  
9       ice conditions, and even in the best conditions, nobody in  
10      industry can honestly brag about their ability to really  
11      protect the environment in the case of a sizable spill,  
12      which has -- I understand has happened, but we don't  
13      have -- and again, that's what we express more than  
14      anything else, the technology available for an oil spill.

15             These are the things that keep our whalers awake at  
16      night. We don't want to stand in the way of development  
17      if we don't have to. We recognize we have received  
18      benefits from development, but when some of the most  
19      important elements of our traditional culture are being  
20      endangered while there is plenty of oil to be found  
21      onshore, then we have to stand up and ask the hard  
22      questions.

23             Since MMS and NMFS is going to allow industry to  
24      conduct seismic operations in the Beaufort and Chukchi  
25      Seas no matter what we say, I would ask the agencies to

1 put reasonable conditions on any activity. These include:  
2 Seismic operations and the sounds they produce must be  
3 kept out of areas that our communities use for hunting  
4 bowhead and beluga whales, seals and walrus. Just a point  
5 up there, you have the migratory routes of the whales, but  
6 also along with that smaller one, that's the planktons  
7 that I've talked about that they have studied and you can  
8 see where the areas are in regards to the seismic and  
9 lease sale.

10 Conflict avoidance agreements must be signed by  
11 industry to ensure proper relationships between developers  
12 and subsistence users. Proof of the industry's ability to  
13 contain and clean up any spills. Appropriate data  
14 collection to document the distribution, habitat, use, and  
15 abundance of marine mammals, especially in the Chukchi  
16 Sea. The information available is outdated and we know  
17 global warming is changing the oceans. Current  
18 information is needed before further seismic activities  
19 occur. Information is needed about the impact from  
20 industrial sounds on marine mammals. Assessment of the  
21 cumulative effect from all the industry, not just seismic,  
22 on whales and other marine mammals.

23 Just a point that the North Slope is the breeding and  
24 nesting [sic] of all birds basically from all over the  
25 world. The fish that come up, all the mammals, sea

1 mammals, they all come from somewhere else. They all come  
2 through the North Slope Borough, within our reach and  
3 Chukchi people.

4 Communication with our communities should have the  
5 highest priority in connection with any offshore  
6 industrial projects. Our villagers can help the  
7 government and industry to avoid problems, but only if we  
8 are in the loop and part of the conversation.

9 If you haven't already guessed, the North Slope  
10 Borough is supportive of the no action alternative. We do  
11 not want any seismic activity in the oceans that we depend  
12 on. This is what we would like. However, we anticipate  
13 that once again our knowledge and expertise will be  
14 ignored. If seismic is permitted, then only one seismic  
15 operation should be permitted per year. This would be the  
16 equivalent of your Alternative 9.

17 I find it curious that the MMS and NMFS have decided  
18 to not even consider Alternative 9, which is only permit  
19 one seismic vessel. You use the excuse that last year's  
20 seismic programmatic environmental assessment concluded  
21 that four seismic operations could proceed without  
22 insignificant impacts. I'm sure you have heard other  
23 places that question that.

24 Therefore, you now conclude that considering limiting  
25 seismic activity to only one operation can be assumed to

1 have no significant impact. Unfortunately, your recent  
2 decision fails to consider the appropriate mitigation  
3 measures that were developed for the environmental  
4 assessment so that your agencies could conclude a finding  
5 of no significant impact. If you intend to include these  
6 mitigation and monitoring requirements in this EIS, then  
7 you can ignore Alternative 9. Otherwise, you must  
8 consider it. Again, we are opposed to any seismic  
9 activity, but if you must permit it, then you must limit  
10 the activity to one operation per year.

11 I know that the AEWG, our wildlife department and  
12 others will have more specific recommendations for you. I  
13 just want to make sure that you understand how important  
14 it is for our whaling culture to maintain its connection  
15 to the bowhead whale. Industrial activity in offshore  
16 areas is a very real danger to our traditions. So MMS and  
17 NMFS, please keep in mind your responsibilities to our  
18 culture and our people. There is no going back if big  
19 mistakes are made.

20 Quyanag.

21 I have some copies here for you that are available  
22 for the mayor's statements.

23 MR. KEN HOLLINGSHEAD: Thank you, George.  
24 This is, as I mentioned, a hearing, a public hearing for  
25 the EIS for seismic, and it's now open for the public to



1       make a statement and comments. If you want to make a  
2       statement and comment, we need to get it on the record, so  
3       we need to have you state your name, and we will try to  
4       make sure we hear it. If somebody is speaking in Inupiat,  
5       Rosabelle will be here to translate -- to translate that.

6             If people want to think about it a little bit, I can  
7       describe more about the EIS.

8                     MS. ROBERTA LEAVITT: I'm Roberta Leavitt.  
9       And I just want to comment on the first thing George was  
10      saying about I'm a whaling captain's wife, and my husband  
11      cannot be here because he is right now actively going out  
12      on the ice and breaking trail for our whaling crew for the  
13      spring season. And this -- it really is a bad time  
14      because he right now has to think about all of our crew  
15      members in making sure that he has a safe place, and  
16      he's -- this is kind of the last thing that he wants to  
17      worry about during this time of the season, especially  
18      after a whale has been landed.

19             And this is really a wrong time to have these kind of  
20      meetings, especially if you want to get the words from  
21      the -- from the actual captains. I know we have  
22      representatives, but right now it's a real difficult time  
23      for them to be pulled away from -- from the heart of our  
24      season because this is the heart of our season.

25             Our boat was -- we sewed our boat February 10, so I

1 have been already doing whaling activities since February,  
2 and it could have been done sometime before the heart,  
3 because we have already caught one -- there is already one  
4 successful whale landed already. And we don't want to  
5 leave anybody out there on the ocean, you know. It's a  
6 teamwork thing. So we have to -- we have to decide which  
7 one is heavier, and right now the tradition is heavier  
8 than having to come and testify again and again and again.

9 That's just -- I just wanted to reinforce his first  
10 comment about how this is very bad timing for these -- for  
11 these things. I know -- I know everybody says, well, when  
12 is a good time? Not in the heart of the season.

13 MR. ROBERT SUYDAM: January.

14 MS. ROBERTA LEAVITT: Yeah, January, yeah,  
15 when we are braiding. That's when we braid our sinew for  
16 our boats. We are not as active, you know. That's just  
17 my comment, but please consider these things are being  
18 done in the heart of our whaling season, and it's not fair  
19 for us. I know it's not fair for you to come. You know,  
20 you schedule all these things, and you have a life, but we  
21 have our life, too, up here that we have been doing  
22 traditionally for many years. And to have -- have it come  
23 during our heart of our season, it's real hard.

24 And the captain, my captain, my husband, his heart is  
25 with his tradition. He's not going to come and sit and

1 tell somebody what has been said over and over again. So  
2 I'm here to voice for my husband.

3 And I do recommend the extension that George was  
4 saying, to extend it, not in our heart of our whaling  
5 season because we do -- I mean, we do have comments, and I  
6 know there is a lot of people that have made comments  
7 because I heard them over the years. I'm not that young,  
8 and I know that I have heard a lot of the comments said  
9 over and over and over. It may have been said by somebody  
10 who is already passed on, but another family member is  
11 bringing them out. But they are still the same issues.  
12 And I'd like to recommend, too, to extend the comment  
13 period.

14 MR. KEN HOLLINGSHEAD: Thank you.

15 MR. GEORGE OLEMAUN: I just wanted to  
16 thank Roberta. You are hearing from a whaling captain's  
17 wife, the one that does all the work. We do exciting  
18 things, but they do all the work. I just want to comment  
19 that.

20 MS. ROBERTA LEAVITT: It's important to  
21 me. I know it's important to him, and he's -- he's got  
22 his mind set on his tradition, and I'm here to voice his  
23 concern.

24 MR. KEN HOLLINGSHEAD: Thank you.

25 Additional?

1                   MS. CHERYL ROSA: My name is Cheryl Rosa  
2     from the Department of Wildlife Management, North Slope  
3     Borough. I've got this written, so I can give this to you  
4     when I'm finished. First, I want to reinforce what's been  
5     said by both George and Roberta. This is probably the  
6     worst time -- and I realize you tried to be here last week  
7     and it's beyond your control that it got pushed another  
8     week, but everybody is so busy right now, and it's not  
9     surprising that there is not a lot of whaling captains  
10    here right now. This is the busiest time for them. And  
11    it's unfortunate, and I would urge folks to really  
12    consider pushing this response period another month, if  
13    possible.

14                I have several comments that I'd like to submit.  
15    Some of them are for specifically to some parts of the  
16    draft EIS, and I'm going to finish with a question. So I  
17    don't think that I have any questions before that.

18                My first comment is regarding marine mammal  
19    physiology and hearing. The draft EIS mentions that the  
20    information about the hearing capabilities of large whales  
21    is mostly lacking, and the data gathered on odontocetes  
22    and pinnipeds is minimal. Marine mammal hearing is key to  
23    survival and is a critical component of communication,  
24    mate selection, feeding and predator avoidance in whales.  
25    Hearing is especially important to marine mammals. And if

1     you think about them in their environment, in a lot of  
2     their environment they are not able to see very far. We  
3     don't know very much about their sense of smell. Their  
4     sense of hearing is key for them. Whales devote over  
5     three times the neurons in their brain to hearing than any  
6     other mammal on earth.

7             Hearing and the perception of sound are very species  
8     specific. We know that for many, many mammals. And it's  
9     also very habitat dependent. And it's important for each  
10    species to be able to filter out the sounds around them  
11    and to prioritize the sounds in their environment to be  
12    able to make sense of things that they need to hear to be  
13    able to live their lives normally. Hearing ranges and  
14    sensitivities at each audible frequency range vary widely  
15    by species, and by any noise at a given level has the  
16    ability to damage hearing by causing decreased sensitivity  
17    called a threshold shift that Ken mentioned earlier.

18            Some of these are permanent. Some of these are  
19    temporary. And they depend upon several things: The  
20    intensity, the duration, and the sensitivity of the whale  
21    to sound. My point here is that at this time we do not  
22    have any direct data on the sensitivity of bowhead whales  
23    to seismic and other industrial sounds.

24            Additionally, there are no published hearing curves,  
25    not just for bowheads, but for any mysticete species. The

1     only way to address the potential impact of seismic sound  
2     on bowhead whales is to extrapolate and model what could  
3     happen to them. And these models are not based on  
4     mysticete whales or baleen whales; they're based on data  
5     that's available, and it's from toothed whales, or  
6     odontocetes. Odontocetes echolocate to get their prey,  
7     and they are capable of producing, perceiving and  
8     analyzing ultrasonic frequencies which are quite high,  
9     which is very, very different than the case in mysticetes  
10    or baleen whales or bowhead whales. Mysticetes are not  
11    known to echolocate, and bowhead whales are predicted to  
12    hear at infrasonic frequencies, much, much lower than the  
13    toothed whales.

14         Because each species is unique, they all have unique  
15    hearing curves, and they differ from each other in range.  
16    They have different sensitivity and peak hearing as far as  
17    these curves go, and it's not possible to provide a single  
18    decibel level that is safe for all species for all  
19    signals. There is no audiogram or hearing curve data  
20    available for the bowhead whale or for any mysticete  
21    species.

22         This situation could be improved. Currently,  
23    anatomical models or mysticete ears, both gross and  
24    histological, are not available. We have access to these  
25    data, and the research should be a required part of this

1 development plan.

2 In order to determine and assess impacts to marine  
3 mammal hearing, we need to know the characteristics of the  
4 seismic and support vessel sounds and the hearing  
5 sensitivities of the species that will be exposed to these  
6 sounds. Minerals Management Service and NMFS need to  
7 commit or require industry to commit research dollars to  
8 collecting these data and developing proper models to  
9 confidently estimate the impact of these activities on  
10 marine mammals in the Chukchi and Beaufort Seas.

11 My next comment refers to -- is regarding cow/calf  
12 disturbance. As was mentioned earlier, there is areas in  
13 the Chukchi that are very important for different things  
14 as far as the bowhead whales goes. It's not just  
15 bowheads. I'm focusing on bowheads right now, but there  
16 is a lot of other marine mammals out there: four species  
17 of ice seals, walrus, beluga, gray whales seasonally.

18 The areas that are affected by this exploration  
19 include places where bowhead whales have their calves.  
20 This is thought to be one of the most sensitive bowhead  
21 whale life history stages. Any disturbance during this  
22 critical period could be devastating to cow/calf bonding,  
23 and additional stress that may be incurred could harm the  
24 development of calves and their ability to feed and stay  
25 with their mother. In addition, recent research has shown

1 cetacean calves to be more sensitive to a wider range of  
2 sound frequencies than adult cetaceans. If this is the  
3 case in bowheads, special measures should be considered  
4 for both monitoring and exposure to sound in nursery and  
5 other cow/calf areas.

6 I also wanted to mention immune function effects  
7 that's mentioned in the EIS. Pulses of sound have been  
8 shown to have negative effects on the immune system of  
9 animals. Chronic noise in the environment is likely to  
10 have even more serious effects. There are ways to monitor  
11 stress, and specifically immune system stress. For  
12 pinnipeds there is not an established baseline for stress  
13 hormone levels, and for many cetacean species as well  
14 that's the case. Research of this nature should be  
15 supported by MMS and industry.

16 My fourth comment -- my second to last comment:  
17 Reaction times are likely to be different when bowhead  
18 whales are feeding. This is something I was concerned  
19 with as I was reading through here. This may result in  
20 animals staying in areas and having to choose between  
21 feeding and auditory damage. And it's important that  
22 seismic work avoid feeding areas during important feeding  
23 times of the year. This data exists and should be  
24 compiled to allow the creation of documents that map  
25 feeding areas on a temporal scale, and this should --



1 seismic activities should be prohibited in these regions  
2 during these times.

3 And finally, I had a question: In section III, page  
4 21, with respect to oil spills, there is a statement that  
5 says, "MMS believes that incidents involving the release  
6 of oil and fuel from vessels will likely be small, on the  
7 order of about 120 gallons in both the Chukchi and  
8 Beaufort Seas." I was wondering if you could provide some  
9 clarification on where that 120 gallons came from. Can  
10 anyone do that? It just seems like a low number to me,  
11 especially when we are not too sure the number of vessels  
12 that will be present.

13 MR. HOLLINGSHEAD: That information would  
14 have come from a subject matter expert who would have that  
15 reference. We would have to get that information.

16 MS. CHERYL ROSA: That would be great.  
17 Thanks.

18 MR. KEN HOLLINGSHEAD: Why do I suspect  
19 that Robert is going to have something?

20 MR. ROBERT SUYDAM: Good evening. My name  
21 is Robert Suydam. I'm a wildlife biologist with the North  
22 Slope Borough Department of Wildlife Management. I've  
23 lived here in Barrow since almost exactly 17 years now. I  
24 was a -- first I'd like to thank NMFS and MMS for coming  
25 here tonight, for traveling to the other North Slope

1 villages and listening to people's concerns. Having you  
2 come and listen to people and take that information back  
3 to Washington, D.C., to take it back to Anchorage and make  
4 decisions about activities that impact people's lives up  
5 here is a weighty responsibility for you. And so I'm  
6 pleased that you are here to get that information. And,  
7 as I'm sure you will, you will take your responsibility  
8 seriously to take the information you are gathering and  
9 use it in decisions that the government makes.

10 As you know, I was in Point Lay and had an  
11 opportunity to make some comments down there. And I won't  
12 repeat many of those, but I would like to repeat a couple.  
13 One, I would also like to request that the comment period  
14 be extended by at least a month. As George and Roberta  
15 and others have said, that this is the worst time possible  
16 to hold a public hearing, that most of the captains are  
17 out on the ice whaling. They are out conducting their  
18 important subsistence activities. The whaling wives are  
19 helping the crews be ready, helping get materials and food  
20 out to the crew.

21 You know, additionally, as you know, we are about to  
22 go to the International Whaling Commission here in another  
23 week and ask them for the next five-year quota for  
24 bowheads. So just those two inconsistencies themselves  
25 keep many people from coming to this meeting and providing

1        comments.

2            It wasn't too many years ago that MMS held a similar  
3        type of meeting and the whaling captains picketed the  
4        meeting. They stood outside this door with signs and said  
5        we don't want seismic activity in the seas. That concern  
6        hasn't changed in the 10 years or 15 years, whatever it's  
7        been. The captains aren't outside that door right now  
8        because they are out on the ice hunting whales. But the  
9        concern is still there.

10          So right now I'd like to provide comments on a couple  
11        different general topics. The first one I'd like to talk  
12        about is monitoring. The important component of this  
13        draft environmental impact statement is about monitoring.  
14        And your agencies talk about allowing industry to go out  
15        on the seas, conduct seismic activity, and that if they  
16        do, they will have to monitor.

17          Well, as you know, last year, in 2006, Shell and  
18        ConocoPhillips and GXT were out in the Chukchi Sea  
19        conducting seismic activity, but as we just recently  
20        learned, their monitoring efforts were not very  
21        successful. They refused to fly airplanes out around  
22        their vessels offshore, and without being able to observe  
23        marine mammals, you can't monitor. You can't monitor  
24        marine mammals in the air. You can't monitor impacts from  
25        the seismic activity.

1           They also showed us that their ability to monitor  
2   marine mammals using sound by listening for marine  
3   mammals, that was a complete failure around the seismic  
4   vessels. They weren't able to monitor. Those are major  
5   problems. If the government is going to allow large oil  
6   companies or even small oil companies to go out there and  
7   conduct seismic activity, those oil companies have to  
8   monitor. They have to collect the information about  
9   what's out there and about what their impacts are.

10           One of those monitoring techniques that they wanted  
11   to use last year was a use of unmanned aerial systems or  
12   aerial planes that are unmanned.

13                   MR. CRAIG GEORGE: Vehicles, they call  
14   them.

15                   MR. ROBERT SUYDAM: These airplanes that  
16   are unmanned aren't capable of monitoring marine mammals  
17   out there yet. They show promise, but they can't do it.  
18   I went to Port Townsend and watched a demonstration, and  
19   they are just not of the highest quality to do realtime  
20   monitoring at this point. At some point in the future  
21   they might be able to, but they can't now, so NMFS and MMS  
22   should not allow industry to use these unmanned aerial  
23   systems or unmanned aerial vehicles to do monitoring.  
24   They need to have a better way of observing their effects.  
25   And if they are not willing to fly airplanes farther

1 offshore, if they can't monitor acoustically, and if they  
2 don't have other techniques for monitoring marine mammals  
3 around the boat or the impacts to those marine mammals,  
4 they shouldn't be out there operating and the government  
5 shouldn't allow them to be out there to monitor.

6 In 2006 the programmatic environmental assessment  
7 required that industry monitor out to the 120 DB isopleth.  
8 As you know, ConocoPhillips sued and a judge was willing  
9 to give them a stay, and so Conoco didn't monitor out to  
10 120. And unfortunately the other seismic company that was  
11 out there that was supposed to monitor, they didn't  
12 monitor, either. That is an unfortunate thing. GXT  
13 didn't monitor what they were supposed to do. I'm not  
14 sure if there is an investigation as to whether that is a  
15 violation of their permit or not, but it is a concern that  
16 they didn't monitor and that information wasn't collected  
17 about their impacts.

18 So if NMFS and MMS is going to allow companies to go  
19 out in the Chukchi and Beaufort Seas, they need to monitor  
20 those large areas around the seismic vessels. We know  
21 that the seismic vessels, the sounds that they produced,  
22 they don't attenuate down to 120 for perhaps out to 100  
23 kilometers, maybe farther. In fact, we heard at the  
24 recent meeting several weeks ago that some hydrophones off  
25 Camden Bay heard GXT's seismic operation over in the

1 MacKenzie River Delta in Canada, perhaps three, 400, maybe  
2 500 miles away. So, again, we know that these seismic  
3 sounds carry a tremendous distance and have a great  
4 potential to impact the marine mammals that are important  
5 for the people that live here, important for their lives.

6 I'd also like to talk a little bit about mitigation.  
7 An important component of the EIS is that there will be  
8 mitigation. Unfortunately most of the mitigation  
9 techniques are supposed to work, but nobody has collected  
10 data, as far as I can tell, to show that they work. It's  
11 not clear that a ramp-up, actually a ramp-up of seismic  
12 activity, actually moves marine mammals away from the air  
13 gun. There is a potential. As Cheryl Rosa mentioned,  
14 that marine mammals' hearing could be damaged because of  
15 these air guns. Does ramp-up really work? We don't know.  
16 Do shutdowns work? We don't know.

17 But we do know that some of the other mitigation  
18 techniques don't work. We know that they are supposed to  
19 monitor -- or last year they were supposed to monitor  
20 these large zones around the seismic vessel as a  
21 mitigation tool, and they weren't able to do that. Yet  
22 they continued to collect seismic data. That needs to  
23 change.

24 MMS and NMFS should do compliance monitoring to  
25 monitor the oil companies to make sure that they are

1 actually doing the monitoring that they are supposed to do  
2 and to make sure that they are doing the mitigation that  
3 they are supposed to do. It seems like that's a real big  
4 failing in the system, that oil companies are out there  
5 basically guarding themselves. They are -- we have to  
6 assume that they are doing what they say they are doing.  
7 We have to assume that they are following the rules that  
8 your agencies have set. And it's not clear to me that all  
9 those rules are being followed, and we need to make sure  
10 that they are.

11 I would also like to talk a little bit about  
12 research. In Point Lay I mentioned that the Chukchi Sea  
13 especially, there is a huge amount that we don't know  
14 about the Chukchi Sea. The surveys from the Chukchi Sea  
15 are 15 or 20 years old, and yet oil companies are going  
16 out there making a huge amount of noise. We don't know  
17 what's out there being impacted. We don't know if there  
18 are significant impacts on the survival of marine mammals.  
19 We don't know if there are impacts to subsistence hunting  
20 in the villages along the Chukchi Sea coast. So if we  
21 don't know what the resources, what the biological  
22 resources are in the Chukchi, how can agencies allow oil  
23 companies to go out there and make huge amounts of noise  
24 and perhaps have a huge impact on those resources? It's  
25 another shortcoming of the system.

1           Industry hasn't been interested in the Chukchi Sea  
2           for more than 15 years, and it's -- all of a sudden within  
3           a year or two there is lots of companies that are  
4           interested. But the research that needed to happen before  
5           the companies went out there hasn't -- hasn't kept pace.  
6           So we are -- we are operating in a vacuum, and that needs  
7           to change. So we need to better understand kind of what's  
8           out there so we can better mitigate what the impacts will  
9           be or what they might be.

10          George also mentioned that we don't know a whole lot  
11          about what the impacts are from seismic on the food that  
12          is important for the marine mammals. We don't know what  
13          the impacts are to Arctic cod or to other fishes. We  
14          don't know what the impacts are to krill, those critically  
15          important food items that do impact or that do relate to  
16          the survival and reproduction of the marine mammals that  
17          are in the Chukchi Sea and the Beaufort, as well.

18          So my preference would be that for NMFS and for MMS  
19          to take the no action alternative. There shouldn't be  
20          seismic, especially in the Chukchi Sea, because of all the  
21          data gaps that exist, because of the potential impact to  
22          the subsistence hunters of marine mammals.

23          Also, as George suggested, my guess is that NMFS and  
24          MMS is not -- that the agencies aren't going to listen to  
25          the people up here. The people have been saying we don't



1 want seismic, we don't want offshore activities for  
2 decades. So my guess is that that's not going to happen  
3 and that you will allow for oil companies to go out and do  
4 a lot of activity out there. I mean, that seems to be  
5 kind of what the government has been doing lately,  
6 allowing oil companies and other big business to go out  
7 and do activities no matter what the potential impacts or  
8 realized impacts are to the people. So if you are going  
9 to allow it, then you should limit it. George suggested  
10 it should be limited to one seismic operation per year.  
11 That seems pretty reasonable to me. That gives MMS and  
12 NMFS an opportunity to collect the biological data that  
13 are needed to evaluate and mitigate impacts to the  
14 resources, again, the resources that are important to the  
15 people of the North Slope.

16 In the PEA last year, in the environmental assessment  
17 last year you really focused on bowheads and gray whales.  
18 Bowheads was appropriate. For years most of the offshore  
19 activity has been in the Beaufort Sea, but as the offshore  
20 activity now moves into the Chukchi Sea, there are many  
21 other resources that are important: belugas, ice seals,  
22 walrus. You heard in Point Hope and Point Lay that they  
23 didn't have a very good walrus hunt last year, and they  
24 think it had a lot to do with all the boat traffic that  
25 was going on last year associated with seismic and other

1 activities.

2       So you need to make sure that the monitoring and the  
3 mitigation deals with those other species of marine  
4 mammals, as well, that they are important to the people of  
5 the villages of the Chukchi Sea, but also all of those  
6 species come from someplace else and go to someplace else,  
7 so the impacts aren't going to be just on Point Lay or  
8 Wainwright or Barrow or Point Hope. That impact to  
9 belugas could impact the hunters in the MacKenzie River  
10 Delta or could impact the hunters in Kotzebue Sound. So  
11 you need to look beyond the borders of the planning areas.

12       So again, my preference is the no action alternative,  
13 but please use -- be responsible. Please listen to the  
14 people of the North Slope as you make your decision s as  
15 to what the final EIS will look like.

16       Thank you again for coming. Thank you again for  
17 listening. And we will definitely have extensive comments  
18 that we will submit in writing, too. Thanks.

19               MR. KEN HOLLINGSHEAD: Thank you, Robert.

20               MS. ROBERTA LEAVITT: Can I speak again?  
21 Is this just a one-time thing? I want to speak a little  
22 more on the species, too, other than the bowhead because  
23 we do hunt the bearded sealed for our skin boat. I have  
24 been butchering seals for more than 20 years now. I can  
25 safely say in the last five years I have had six seals

1       uneatable, unusable to where I had to just throw them out,  
2       throw them back into the ocean. One of the -- I did have  
3       one of them tested, and it did come back malignant with  
4       cancer.

5               So another thing to be watching out for, too, for  
6       these ships that are going is the waste that they are  
7       putting in the waters because it is affecting -- it is  
8       affecting all these -- the bearded seal, we hunt that for  
9       kiniqtuq and misigaq. And that's one of the things that  
10      is important, too for our well-being. Take a teaspoon of  
11      misigaq, and that's better than Dimetapp. It really is.  
12      You know, you -- it may sound funny, but -- beluga oil,  
13      you rub it on your chest for a chest cold. We use it more  
14      for than just food.

15             And nobody is monitoring what's being thrown away  
16      from any of those ships, you know. Where is their solid  
17      waste or bathroom? What do you call that? Where is their  
18      feces going? Is it going into the food that the seals are  
19      eating? You know, you got to watch that, too, because we  
20      do depend on other things other than the bowhead.

21             And I thank Robert for reminding me about that, but  
22      that is an important thing, too, because the food that  
23      they eat, are you going to be letting them go -- are you  
24      going to seismic around where the food is and then change  
25      that pattern? Because when the food is not there, you

1 know the whales aren't going to be coming or the seals.  
2 The clams underneath the ground, the stuff that comes down  
3 and settles to the ground, it goes into the clams, and the  
4 walrus eat the clams. So it is a food chain event that  
5 happens with the stuff that is being thrown away.

6 And they say, yeah, it's a good thing, but then, oh,  
7 I'd say 25 years ago there was barrels that we found on  
8 the ocean that were labeled alcohol. And they came from a  
9 ship, but we had how many people die from that? And you  
10 know, if that's happening now, what else is being thrown  
11 that is not being said by anyone? Are you going to  
12 confess that, oh, I accidentally dropped that one? Who  
13 cares? We care. I think I'm done.

14 MR. KEN HOLLINGSHEAD: Thank you, Roberta.  
15 Additional testimony and comments? Craig, I know you  
16 can't leave without saying something.

17 MR. CRAIG GEORGE: My name is Craig  
18 George. I'm a wildlife biologist with the North Slope  
19 Borough Department of Wildlife Management, and primarily  
20 study bowhead whales, as you know. And again, I'd like to  
21 thank you all for coming up for this important meeting. I  
22 agree with most of the comments that are made this  
23 evening.

24 I just got in off the ice where I was visiting with  
25 Harry Brower, Junior, who is the AEWG chairman, as you

1 know, and -- on some business matter, and he wants me to  
2 pass on that he's very sorry that he couldn't attend this  
3 evening, but as a lot of people have said, he's heavily  
4 involved in whale hunting at the moment, and there are  
5 actually -- the wind is coming down a little and they are  
6 moving there -- setting up on the ice edge as we speak.  
7 But he also said he would like to invite you, Ken, out on  
8 the ice. I'd be glad to take you out there tomorrow or  
9 even later this evening. And he wanted you to see the  
10 environment that he's, you know, involved and charged with  
11 protecting and that's so important to people here.

12 One sort of nonscientific comment I made at the open  
13 water peer review meeting is that it would be really  
14 helpful at -- when we are discussing seismic sounds to  
15 actually be able to hear them. And I know this sounds a  
16 little anthropogenic, but I think it is helpful for a lot  
17 of reasons to be able to hear them and adjust it  
18 appropriately to the levels that -- the perceived levels.

19 And I remember in particular one evening when we were  
20 doing acoustics monitoring over near Kaktovik in the fall  
21 that we were listening for -- we were trying to locate  
22 feeding whales over there, and there was a seismic ship  
23 operating in Canada which was, we estimated, about 30 or  
24 40 miles away from our monitoring location. And it was  
25 booming in for the entire time we were there. Every seven

1 to ten seconds there was a loud clunk.

2 And it would -- again, I'm being anthropomorphic  
3 here, but it was a very disconcerting sound. And one  
4 thing that Chris Clark has pointed out that this is -- can  
5 be an extremely loud ocean, but he also said that it can  
6 be the quietest. And when it's quiet, the acoustic  
7 environment is really remarkably different, I guess, than  
8 essentially any other ocean. And you can hear huge  
9 difference -- huge distances. And it is rather  
10 remarkable, especially in the spring when there is young  
11 ice and no wind, ambient noise levels are very, very low.  
12 And he thought that it was a -- that may have some  
13 relevance to interpreting what the opposite, you know,  
14 like intensive industrial sound might be doing to marine  
15 mammals.

16 Anyway, so just a few comments. And I think some of  
17 these you have heard before, but in terms of understanding  
18 acoustic effects of seismic testing, we do -- like Robert  
19 said, we have to understand the distribution of marine  
20 mammals; you know, where the critters are, what they are,  
21 and relative abundance, so we know that, you know, what  
22 species are being affected and what numbers. And little  
23 is known about the Chukchi. We have mentioned, as you  
24 know, the fate of deflected whales is still unknown, and  
25 that's something that would be nice to know before we

1       permitted a lot of seismic activities.

2           I mentioned that this can be a very loud ocean, but  
3       it apparently is one of the quietest oceans in the world  
4       and by far the least industrialized. And that should be  
5       considered in the analysis. We need sound source levels  
6       for all the -- all the vessels and operations that are  
7       operating in these waters, and the acoustic budget, what  
8       is the total sum of all the acoustic power moving out  
9       there to make reasonable decisions.

10          We have to understand the feeding areas that have  
11       been mentioned; locations, areas, and relative importance  
12       like, you know, the densities of the prey in those areas.  
13       The question of, like Cheryl was mentioning, tolerance  
14       from industrial noise and whether there is tipping points.  
15       You mentioned the 120 DB exclusion zone. In that case, it  
16       was about 20 kilometers or more. But I think -- and we  
17       also heard that -- I think Robert mentioned that last  
18       summer off Prudhoe they could clearly hear seismic boats  
19       operating four or 500 miles away in Arctic Canada, the  
20       Canadian Beaufort.

21          So there is a point where might ensonify the ocean  
22       enough where we have abandonment of areas of feeding  
23       areas. And I don't think we understand that well enough  
24       at the moment to make predictions about those effects.

25          Fish -- I've found this very interesting in the

1 literature, the reactions of fish to seismic sound and  
2 that catch rates of herring and those sorts of species  
3 would drop considerably after -- after seismic exploration  
4 was done in areas. And this is hot off the press, but  
5 when we are analyzing the stomach contents from 2002, fall  
6 harvested bowheads, this has never been seen before, but  
7 most of the stomachs had Arctic cod in them. I just got  
8 an e-mail from Gaye.

9       So it's unusual, but the point is that apparently in  
10 certain times and seasons -- and these were all small  
11 whales which often feed benthically, near the bottom.  
12 They may consume considerable amounts of small Arctic  
13 codfish as prey. And apparently they are -- cod species  
14 and herring, those sorts of things do show reactions to  
15 seismic noise. Anyway, just something else to think  
16 about.

17       We mentioned that the Chukchi is a calving area for  
18 the bowheads, and also calf rearing goes on there.

19       So you know, we heard -- one of the comments we hear  
20 from some of the senior captains is what are the effects  
21 of intense seismic activity on bowhead prey from  
22 phytoplankton up to zooplankton and now, I guess, small  
23 fish, as well. But we haven't given them an answer, and I  
24 feel sort of badly about that. But it's something we  
25 clearly need to investigate.



1           And the other -- I just wanted to reiterate some of  
2   the things that Cheryl mentioned about bowhead ear  
3   morphology and hearing, that sort of thing. Obviously we  
4   don't know a lot about it, and it's -- this is a case  
5   where I think that in the -- in the face of, you know,  
6   poor data, that we want to use a precautionary approach as  
7   we do in other areas of conservation, and I have a  
8   suspicion that we are going to look back some day on these  
9   years of intense seismic testing as a poor decision, that  
10   I think we are going to find out that a lot of marine  
11   mammals are, in fact, negatively affected by it. And it  
12   clearly affects hunting. As you all know, if there is  
13   intense seismic activity, it's virtually impossible to  
14   have a successful bowhead hunt.

15           Anyway, I hope some of these comments are helpful,  
16   and the offer stands if you want to get out on the ice.  
17   Thank you.

18                   MR. KEN HOLLINGSHEAD: Thank you, Craig.  
19   George, do you have comments that you wanted to make?

20                   MS. DORCAS STEIN: I'd like to say  
21   something. My name is Dorcas Stein. I normally don't  
22   speak out in public hearings. I like to listen to what's  
23   going on, though. And I just want to say that I was born  
24   and raised up here. I'm Inupiat. I'll never leave my  
25   homeland. And I have children, grandchildren who love our

1 way of life, and I just want you to know how much it hurts  
2 inside of me -- I'm talking here just as a person, just as  
3 an individual -- to even think that they are going to  
4 exploit our oceans, which are our garden. Our  
5 ancestors --

6 We live off the ocean. You have heard it many, many  
7 times. I traveled with a party to Nuiqsut and Kaktovik  
8 several weeks ago and listened to all the testimony when  
9 the State held the hearing for Shell Oil's proposed  
10 exploration plans and so forth, and every single one of  
11 them were opposed. They were crying out. I mean, I kept  
12 thinking back the past two weeks about it. It kept coming  
13 out. And I just wanted to say it's like our people are  
14 crying out for you not to do this.

15 And yet I think -- I'd like to respect our  
16 government, I really would, and have faith in the  
17 government that they listen to us little people. You  
18 know, we are a different culture. We are a different  
19 race, and tribal governments were set up so that the  
20 tribal governments could deal government-to-government  
21 basis with the United States of America. What are we to  
22 do if they don't listen? Our state municipal government  
23 is crying out. Our tribes throughout the Slope and the  
24 villages are crying out, please don't do this.

25 And before us many Elders have passed on that we

1     listened to throughout the years, speaking against, no,  
2     don't touch our ocean. That's our garden. That's our  
3     livelihood. If you lived up here for the amount of time  
4     they have lived up here -- and I really thank our  
5     scientists and researchers because they understand how  
6     sensitive this ecosystem here is, just as our forefathers  
7     knew. If you could experience that, I think you could  
8     have a little better understanding of what we are trying  
9     to say.

10         And the other thing is when it comes to the sound, we  
11     know from our ancestors, from history, from our Inupiat  
12     history that they didn't dare go near the ocean once --  
13     they didn't even speak above a whisper because the whales  
14     were so sensitive to noise. This is documented. And I  
15     just listened to some whaling captain saying -- and I  
16     never thought of it when my brother's whaling crew that  
17     I'm part of go down every year, where they urinate, you  
18     know, have a little bathroom area there, that this one  
19     crew didn't even let it accumulate because the whales and  
20     the animal smell was so sensitive. They can smell real  
21     sensitive.

22         And I know I can see here that we need to pull out  
23     all of our Elders' research and stuff on this and use it  
24     to help the scientists do this documentation. And I'm  
25     just telling you it's like we are crying out as a people,

1 but I'm thinking in my mind I look at, like, Washington,  
2 D.C. far down there and say how are they going to  
3 understand? Are they going to treat us just the way they  
4 did the American Indians? I try not to think like this,  
5 but I hurt. I know I had to forgive the United States  
6 government for what they did in the process of  
7 assimilation with us, and I try to, you know, broaden my  
8 understanding and all this forgiveness and because they  
9 meant well, but I don't think the government is meaning  
10 well at all. Where is the value?

11 They said they would never do this again, and if you  
12 approve it, look at our race. I'm telling you, the impact  
13 is going to be so drastic, are we going to become welfare  
14 recipients? It's almost like a lot of our people will  
15 begin dying out because we are not successful in eating  
16 your food. We need our food in our ocean. And it's  
17 documented that a lot of these animals are changing  
18 because there is changes already that are being  
19 documented.

20 But my main point that I wanted to say was I feel a  
21 cry. I feel a cry, just wanting to cry because of what  
22 you're proposing to do. And please listen to the  
23 scientists, the researchers. They have done the research.  
24 They are trying their best; even though from right and  
25 left they are saying no, somebody is controlling the purse

1 strings. They want to research this, and they are saying  
2 no funding for you, sorry. I mean, where is the values?  
3 You know, what is most important? If you need to spend  
4 money, then help us with wind power, solar power, not  
5 fossil fuels. I mean, we have all seen The Inconvenient  
6 Truth, or a lot of us have. And that's scary. And to  
7 continue to want to exploit out there will only cause  
8 greater emissions. And I hate to see that.

9 I just really discourage you and listen to them and  
10 extend the comment period. I just wanted to speak from my  
11 heart on that. Thank you.

12 MR. KEN HOLLINGSHEAD: Thank you very  
13 much.

14 MR. KEN GREEN: My name is Ken Green. I'm  
15 not a biologist and I'm not a whaler. I haven't lived in  
16 Barrow very long. My wife is Cheryl Rosa. I hear  
17 secondhand quite a bit of the information about the  
18 monitoring that was done, supposedly done, supposed to be  
19 done last year, and as Robert said, who is monitoring the  
20 monitors. Who is making sure that the monitoring is being  
21 done? I mean -- and what's the penalty for not  
22 monitoring? It just seems like three strikes and you are  
23 out kind of thing. Something should be set up where,  
24 okay, you didn't do this part of the monitoring, you  
25 didn't do this part of the monitoring. What's next?

1     Okay. Go ahead. Do your seismic work. Yeah, that just  
2     seems -- it's definitely a flawed system at this point.

3             And as far as what Dorcas just said and the crying  
4     out, I have been to, I don't know, four or five, six maybe  
5     of these, not MMS, but -- and not all offshore seismic,  
6     some onshore, some polar bear, whatever; a whole bunch of  
7     these kind of talks. And pretty much every meeting has  
8     been at least one comment about not being listened to by  
9     the federal government, by whoever the organizations are  
10    that are doing this development. And, yeah, it's just a  
11    -- it's terrible, terrible. I mean, it makes me sad to  
12    see what is being done. And yeah. That's all.

13                   MR. KEN HOLLINGSHEAD: Thank you.

14                   MR. GEORGE OLEMAUN: I'm going to bring  
15    this out again. This is a book that was done in '93, I  
16    believe, Taking Control. It kind of tells where we are,  
17    what we are and why we are; where we are today, what we  
18    were back -- but just another quote here from this. And  
19    this is from Eben Hopson, just a quote from here from what  
20    he's saying. "We Inupiat are an indigenous circumpolar  
21    community. We have a common regional economic community  
22    of interest. For thousands of years our common economic  
23    interests have centered upon the food chain upon which we  
24    depend for survival. Our economic and social welfare  
25    depended upon the migratory birds and animals, all

1     protected now under international treaty. We Inupiat  
2     still are a community bound together by the game we hunt  
3     and eat, and we are bound even more tightly by the  
4     environment that sustains the game we hunt, the sea. For  
5     me, the Beaufort Sea. The Arctic Ocean."

6             "Now, since the Prudhoe Bay oil strike, we have been  
7     additionally bound by the world's need for our oil, gas,  
8     and coal. For the first time in our history, others covet  
9     the wealth of our land which, until recently, was viewed  
10    by most as a frozen wasteland." And again, it's stating  
11    that the ocean is alive, and I just want to put --

12            Just one more here, unless anyone else is going to  
13    say anything, but just to continue on sharing. "Sharing  
14    is an important social behavior in the Arctic. Like most  
15    behavior, sharing has rules. One of the most important of  
16    these is that sharing be a cooperative act of give and  
17    take. Sharing is a free but necessary behavior in our  
18    community. We want to share our wealth in oil, gas, and  
19    coal, but we feel that we must have a say in the means by  
20    which our fields are extracted from our land. Sharing  
21    means to us that we must be allowed to measure  
22    environmental risks in our own Inupiat language. For in  
23    our language is a whole natural science of the Arctic, and  
24    we feel that others should listen to us when we warn them  
25    against making a serious mistake. Year after year we hear

1 of scientists discovering things at the Naval Arctic  
2 Research Lab" -- that was a lab out here -- "that are  
3 common knowledge among us." He's talking about  
4 traditional knowledge.

5 "Through a sharing relationship, we could enable  
6 faster, environmentally safer Arctic resource development.  
7 We are the experts on the ice, and ice is the biggest  
8 problem facing Arctic Shelf development." And just again,  
9 quoted from Eben Hopson.

10 With that, thank you.

11 MR. KEN HOLLINGSHEAD: Thank you.

12 MR. CRAIG GEORGE: I had a couple other  
13 things, but I guess we don't necessarily have to go to  
14 the -- we are not talking into a mike.

15 MR. KEN HOLLINGSHEAD: No. Just speak  
16 loud.

17 MR. CRAIG GEORGE: A couple other things  
18 that I think need attention is there seems to be a real  
19 disparity between -- with bowheads between feeding and  
20 migrating animals. They react very differently. And I  
21 think now we are beginning to see that in the studies that  
22 feeding animals will tolerate much higher levels of --  
23 DB levels than migrating animals. And you know, maybe the  
24 reason is obvious, maybe it isn't, but that's something  
25 that's starting to be fairly evident in the studies. But



1 of course, the migrating animals being more sensitive in  
2 deflecting. So that's something that needs attention.

3 I think it may have been mentioned, but the different  
4 age classes will probably react differently from sex, age,  
5 mother/calf groups, and then time and location are all  
6 going to affect the, you know, the way the animals react.  
7 But, you know, we were discussing this the other day, just  
8 the effects of seismic on marine mammals and other mammals  
9 in general, and I think any of us that have hunted -- I  
10 mean, it's just sort of a common sense thing. The first  
11 thing your dad tells you is to be quiet and everybody --  
12 you whisper while you hunt. And I was watching one of  
13 those TV channels that has the hunting special, and  
14 through the entire thing the guy is whispering through  
15 the -- all the narration is done whispering. And I  
16 thought there it is; it's perfectly obvious. This is what  
17 the hunters have been telling us forever.

18 And then finally, you know, I have been up here a lot  
19 of years now, and some of the first things I heard were  
20 some of the comments, the sea is our garden and, you know,  
21 the ocean is our life and this sort of thing. And there  
22 is a real deep visceral thing, and you have heard it again  
23 this evening that, you know, this is -- this ocean is  
24 extremely important. And I think the perception is that  
25 if any of it is damaged, it's all damaged. And you

1 know -- anyway -- so clearly it's a highly emotional  
2 issue. So -- that's all. Thanks. --

3 MR. KEN HOLLINGSHEAD: Thank you, Craig.  
4 Yes.

5 MS. EDITH NAGEAK: My name is Edith  
6 Nageak. I was raised here. I moved -- our dad, our  
7 father, Vincent Nageak, was a whaler and moved the whole  
8 family from Kaktovik to Barrow, and this is where I was  
9 raised. And I was brought up with whaling. Our dad,  
10 Vincent Nageak, was a whaler, and our family are whalers.  
11 And every spring, summer, we would go down the coast and  
12 hunt seal, all the mammals from the ocean.

13 And on behalf of the -- my family who have hunted  
14 whale and have harvested walrus and have -- I could just  
15 see them cutting up the ugruq skin and getting it ready  
16 for the whale boat, the skin boat. And also the polar  
17 bear. I remember our parents cutting up the polar bear,  
18 you know, for food, and also the fur was also being used  
19 for the clothing, for our dad's hunting clothing.

20 And I think you are going to make such a drastic  
21 mistake if you ever allow the oil companies to go down to  
22 the ocean. It constantly changes. And all of a sudden --  
23 sometimes it would break up, and just imagine a ship being  
24 on there and that happens or an oil spill -- I know an oil  
25 spill will happen because those ships are not pliable like

1     our whaling skin boats. There is going to be a gash on  
2     the boat, on the ship. And there is going to be an oil  
3     spill. So it's really going to affect our way of life.  
4     Whaling is a spiritual essence of our culture.

5             So I've lived -- I'm going to be 60 in June, and I  
6     could just hear our Elders. I remember these kinds of  
7     meetings before. They say no. No, don't -- don't drill  
8     oil. No, don't -- don't damage our land. That's where  
9     our food is. So on behalf of our ancestors -- and I know  
10    I've heard them before. I remember somebody saying hunger  
11    knows no law in one of the meetings. Just -- wow. It  
12    still rings in my ear. So have respect. In our Inupiat  
13    values there is this respect of self and others and the  
14    land and the animals. That's our way of life. Have  
15    respect and listen. Thank you.

16                   MR. KEN HOLLINGSHEAD: Thank you.

17                   MS. MARTHA IPALOOK FALK: My name is  
18    Martha Ipalook Falk, for the record. And I work for the  
19    North Slope Borough Planning Department Permitting and  
20    Zoning, but I also wear the Native Village of Barrow  
21    Tribal Council hat and also the ICAS, Inupiat Community of  
22    the Arctic Slope, hat, also, on their tribal council. And  
23    I know that with both of those entities that we are not in  
24    approval of the open water seismic programs that are going  
25    to be -- activities that are going to be -- are being

1 proposed to operate out here in the Chukchi Ocean and the  
2 Beaufort Sea.

3 And I also wanted to inform you that I was one of the  
4 marine mammal observers on the seismic boats during the  
5 time frame that you were referencing to, the 1990s. And I  
6 can attest to the fact that seismic operations are very  
7 loud and noisy. And I did see seals, pinnipeds -- I guess  
8 you call them pinnipeds. That's the technical name for  
9 them? They were impacted by, you know, the air gun noise,  
10 and we were able to -- they did cooperate when we had to,  
11 you know, shut them down and ramp them up, but the animals  
12 were impacted. I saw that.

13 And the other thing is that you had talked about  
14 mitigation measures, this man here. I don't remember your  
15 name.

16 MR. HOLLINGSHEAD: Ken.

17 MS. MARTHA IPALOOK FALK: Ken. And I  
18 don't know if -- somebody mentioned conflict avoidance  
19 agreements earlier. Was it you, Robert?

20 MR. ROBERT SUYDAM: I may have.

21 MS. MARTHA IPALOOK FALK: Anyway, that  
22 came to my mind. And I thought about the conflict  
23 avoidance agreements and how it came to be about. And one  
24 of the reasons for that conflict avoidance agreement, I  
25 know, was because of the seismic activities that were

1       going to be actively operated, and the issue was that they  
2       were going to be conducting these activities during the  
3       bowhead whale season for our people, and so the conflict  
4       avoidance agreement was come about, and it was agreed.

5               Many negotiations took place. Many meetings took  
6       place between community leaders from years back to where  
7       we are now. We are still working on those issues about  
8       conflict avoidance. And one of the main reasons for that  
9       agreement was so that industry would not conduct their  
10      activities during the active bowhead whale harvest season.  
11      And now I see that Shell is going to be operating their  
12      activities during our bowhead whale harvest season, I  
13      believe in the fall, right?

14                       MR. ROBERT SUYDAM: They want to.

15                       MS. MARTHA IPALOOK FALK: Or they are  
16      proposing they want to. And then I thought about it, and  
17      I was going, well, all those years of my people  
18      negotiating with oil and gas industry to form a conflict  
19      avoidance agreement, where are all those years going to?  
20      Now it's just like it's being thrown out the window  
21      because now Shell wants to operate their activities during  
22      our fall bowhead whaling season. And one of the main  
23      purposes of that conflict avoidance agreement was so that  
24      they would not operate during the bowhead whaling season.

25               So to me it just seems like, you know, what was the

1 purpose of all of those meetings that took place? Why  
2 were all those agreements made between my community  
3 leaders and all the leaders throughout the North Slope and  
4 oil and gas industry? Where is it going now? It seems  
5 like it's not going anywhere now.

6 That's about all I have to say. And I would ask and  
7 request that you extend the comment deadline for another  
8 month because of the fact that the majority of the people  
9 that would normally be in public hearings like this are  
10 not here because, as you heard so eloquently spoken by the  
11 whaling captain's wife, they have higher priorities right  
12 now. And that's to provide for us as a people so that we  
13 can continue to be unified as a people because the bowhead  
14 whale is central to who we are as a people. Thank you.

15 MR. KEN HOLLINGSHEAD: I might mention  
16 that the conflict avoidance agreement, previously called  
17 in earlier years called the oiler/whalers agreement, was  
18 an annual agreement that was done by these -- between the  
19 oilers and the whaling captains and the AEWC. And in the  
20 communities that we have seen come through, each of these  
21 have said they will not sign a conflict avoidance  
22 agreement, so I think that is one of the difficulties that  
23 is -- that National Marine Fisheries Service is facing  
24 because in order for us to issue an authorization or make  
25 a determination under the Marine Mammal Protection Act, we

1     have to make a determination that the industry activity  
2     will not have an unmitigable adverse impact on the  
3     subsistence uses of marine mammals.

4             So by not having a conflict avoidance agreement,  
5     which is an industry-to-community agreement, it's  
6     defaulted to the -- to the National Marine Fisheries  
7     Service to make that determination. And what we look at  
8     is one small part of that conflict avoidance agreement,  
9     which is to protect the bowhead whale subsistence harvest  
10    on previous conflict avoidance agreements.

11            There may be in the future additional conflict  
12    avoidance agreements to protect the beluga harvest in the  
13    Chukchi Sea or even the bowhead harvest -- the spring  
14    bowhead harvest in the Chukchi Sea. Right now I think the  
15    requirement that we have that no seismic prior to July  
16    15th and Shell's commitment right now that they will not  
17    start before July 30th makes that commitment that there  
18    will not be an unmitigable adverse impact on the spring  
19    hunts. But the fall hunts now is going -- looks like will  
20    default to the National Marine Fisheries Service to make  
21    those determinations and to determine what the mitigation  
22    measures would be for the fall bowhead hunt.

23            MS. CHERYL ROSA: Ken, do you know -- you  
24    mentioned that this may in future times, the CAs may also  
25    involve beluga hunts. What about walrus hunts and bearded

1 seal hunts? I know you can't see into the future, but is  
2 it a potential?

3 MR. HOLLINGSHEAD: The -- for the bearded  
4 seal hunt we would have to look a little more closely. I  
5 don't have sufficient information to know that there would  
6 be an effect. In each of the communities that we have  
7 been to, we have been asking about everything, the timing  
8 for subsistence hunts, for even, you know, the fishery  
9 resources, the seal resources, et cetera. So we have to  
10 look at that, the record that came upon that. The walrus  
11 is not under the jurisdiction of the national Marine  
12 Fisheries Service; it's the Fish & Wildlife Service. And,  
13 as you know, at the open water meeting, it looks like the  
14 Fish & Wildlife Service is now starting to join up -- join  
15 with us in trying to have the open water meetings together  
16 to make the determinations, but this goes back -- back to  
17 that agency to make that call.

18 MS. CHERYL ROSA: Thank you.

19 MS. LAYLA HUGHES: I just want to comment  
20 that I think that the particular difficulty with the CAA  
21 negotiation this year really calls into question the  
22 assumption that NMFS has made all these years that if a  
23 CAA is agreed upon, that it meets the standard of the  
24 MMPA. It's -- I find it a little bit hard to understand  
25 how the outcome of a negotiation, which is influenced in



1 many ways very little by a clear understanding of how  
2 seismic activity actually affects resources, but --  
3 subsistence marine mammal resources, but instead is  
4 influenced much more by the negotiating power of the  
5 respective sides, and by the -- the agendas of each side.  
6 And in particular, we see this year that there is an  
7 urgency to get out there and to operate for a certain  
8 number of days regardless of what the impacts might be.

9       And so when these are the kind of concerns and maybe  
10 others, other types of pressures that are brought to the  
11 whalers to try to convince them that they have to sign  
12 this agreement, when these are the kind of things  
13 influencing the process, it's really hard for me to  
14 understand how the agency can -- can say that an  
15 agreement, whatever the outcome is, is somehow fulfilling  
16 the requirements of the Act.

17       And it goes back to what I said on the last day of  
18 the open water meeting, which is that I really think  
19 it's -- it's almost fortunate that you are going to have  
20 to figure out this year what that standard really means in  
21 terms of mitigation because it makes more sense -- it  
22 makes more intellectual sense for that standard to be  
23 defined by the information we have and by the experience  
24 of whalers rather than defined by a -- the relative  
25 negotiating power of two sides, one being an extremely

1 super huge multinational oil company.

2 And so I don't -- I think that on the one hand  
3 it's -- it's really good that people are pointing out that  
4 maybe we need conflict avoidance agreements for marine  
5 mammals -- other marine mammals besides whales, but I  
6 think that people are kind of just saying that because  
7 it's -- the conflict avoidance agreements are the default  
8 way of dealing with the standard. And I think even better  
9 than that would be NMFS really investigating and  
10 understanding and making a determination that was based in  
11 scientific and traditional knowledge about what are  
12 sufficient mitigations to protect subsistence for all of  
13 the marine mammals.

14 MR. KEN HOLLINGSHEAD: We have a specific  
15 definition of what an unmitigable adverse impact is, and  
16 we have to follow that. So what we have done in the past  
17 is that if a conflict avoidance agreement appears to reach  
18 that, and there are fallback safety factors in those,  
19 those kinds of factors, then we believe we have met that  
20 criteria. So an opening position by either side is not  
21 necessarily the final position that the National Marine  
22 Fisheries Service would go to. We would look at both  
23 sides in making that determination.

24 MS. LAYLA HUGHES: That's good to hear.

25 MR. KEN HOLLINGSHEAD: Again, Robert, we

1       can't get into a discussion. I'm just trying to be  
2       helpful.

3                       MR. ROBERT SUYDAM: Just asking a  
4       question. What is the definition, then, of unmitigable  
5       adverse effects and how it applies to this? And  
6       specifically I guess I'm trying to better understand how a  
7       conflict avoidance agreement or some type of mitigation  
8       measure to protect subsistence hunting, how that would  
9       occur if a conflict avoidance agreement isn't signed,  
10      whether it's by the Alaska Eskimo Whaling Commission or  
11      the Alaska Beluga Whale Commission or the Walrus  
12      Commission, whatever it might be; what's the definition  
13      and then how would NMFS go about kind of satisfying the  
14      requirements of the MMPA?

15                     MR. KEN HOLLINGSHEAD: Unfortunately, I  
16      don't have it memorized because I have not used that.  
17      It's in 216.103, and it has three parts, one of which is  
18      very simple: Don't obstruct the harvest. But the other  
19      ones are a little bit more obtuse. But essentially the  
20      conflict avoidance agreement, that one part of a very  
21      large document, was of interest to the National Marine  
22      Fisheries Service because we felt that it got to the heart  
23      of avoiding that unmitigable -- to avoid that impact, and  
24      it was the mitigation measures. And if it was done  
25      correctly -- you know, for example, back in the early

1     years, the ones that don't work now, was the industry  
2     moved west to a certain point. We looked and saw if was  
3     an impact. If there was, then you moved them further  
4     west. And you kept doing that. So it was an adaptive  
5     management approach.

6             The one that was put forward in 2006 were blackout  
7     periods that went for each of the villages. It would have  
8     been interesting if Shell had been in the Beaufort Sea to  
9     see if that would have worked. I believe it would have.  
10    There may be some changes needed to that. We would have  
11    to look at that. But that's the part that we -- that we  
12    looked at.

13            I have had discussion with your former attorney about  
14    this where once the conflict avoidance agreement has been  
15    signed and said, oh, yeah, but there is more to it. And I  
16    said, no, that's really not -- this is not no impacts.  
17    This is to avoid an unmitigable adverse impact, which  
18    means doing something that prevented the subsistence, in  
19    our case for the bowhead whale, prevented the hunters from  
20    obtaining their quota. We would have -- we couldn't do  
21    anything about the weather or something or where the  
22    whales were, but we needed to look at what was happening  
23    to the potential that the industry could be having on the  
24    subsistence bowhead whales, especially in Kaktovik and  
25    Nuiqsut and Barrow. Did I get --

1                   MR. ROBERT SUYDAM: We will get there.

2                   MR. KEN HOLLINGSHEAD: Okay.

3                   MS. ROBERTA LEAVITT: I want to say two  
4 things. One on the sound issues. I not only am a person  
5 that stays on the land and takes care of my whaling crew,  
6 but I also go out on the ice. And I know for a fact -- I  
7 was at the shooting station, which we call piignik. One  
8 year I heard the ice crack all the way down by monument.  
9 And it was a very clear day. And you guys need to take  
10 into consideration, too, when you are doing that that the  
11 type of day that it is. On a windy day, it's not going to  
12 be the same as a calm day.

13                  So when you are making your -- how do you say -- your  
14 reports or something, at least mention what type of day  
15 the -- you know, because in school we tell our kids --  
16 they have got a book now that says you record all of  
17 your -- all of your wind directions, what the water  
18 conditions are, and they are teaching that in school, and  
19 we are showing our younger whalers that, too. It does  
20 make a difference when the water is -- how do you say?  
21 When it's more turbulent and when it's more calmer, it  
22 makes a very big difference in how far that noise will  
23 carry.

24                  When I even witnessed in the boat just a little tap  
25 made that whale turn, just from the oar hitting the frame

1 of the boat, that little noise. We may not hear it.  
2 Those people on the other side of the room will not hear  
3 it, but that whale will definitely hear that sound. And  
4 it definitely will change. If it's coming in your  
5 direction and it hears that, it's going to change its  
6 direction no matter what.

7 And I want to say thank you for bringing out how the  
8 whales' hearing is so sensitive. And I can attest to how  
9 that is, too. Even just a small noise, a pin dropping  
10 when the water is calm, you can hear that pin drop on the  
11 sled from a far distance. You don't have to be sitting  
12 next to me to hear that pin drop. You can be sitting on  
13 the other side of the room from where I'm at and still  
14 hear it. That's how the sound changes, too, when the wind  
15 is blowing, when there is no wind blowing. You got to  
16 document your -- how the day is, too, when that -- when  
17 that seismic activity is going on because it really does  
18 make a sound difference when the -- when the water is all  
19 turbulent or if it's calm.

20 And then the other comment is on the mitigation  
21 stuff, like Robert was saying, nobody reported back.  
22 Nobody -- nobody was watching them. And we need to set up  
23 stipulations if we are going to do that. They have to  
24 report back to somebody other than the ones that are the  
25 grantee. You know, you are going to grant them the say,

1     yeah, you are going to do it, but we are the ones that are  
2     being affected, and we need to know that information, too.  
3     We need to get a person so that we can hear what -- what  
4     those things are, and then we can report back to you guys  
5     saying they are not following through. You don't need to  
6     know in every one of these EIS reports saying -- or  
7     meetings saying, well, how come you didn't report back to  
8     us. And maybe that might be the first time somebody hears  
9     that nobody was monitoring it. There has got to be some  
10    set monitoring device for our community, not just for the  
11    oil industries.

12           Thank you.

13                   MR. KEN HOLLINGSHEAD: Thank you.

14                   MS. MARTHA IPALOOK FALK: Since I brought  
15    up the issue of conflict avoidance agreement, I'm going to  
16    put my tribal hats on and talk about the conflict  
17    avoidance agreements. Those agreements are signed with an  
18    organization at this time, right?

19                   MR. KEN HOLLINGSHEAD: Correct, yes,  
20    ma'am.

21                   MS. MARTHA IPALOOK FALK: They should be  
22    negotiated with the regional tribe because the whaling  
23    captains associations doesn't represent the whole  
24    membership of the tribe. They only represent the whaling  
25    captains. So those conflict avoidance agreements should

1 be negotiated on the regional level through the tribal  
2 entity that represents the membership.

3 MR. KEN HOLLINGSHEAD: The conflict  
4 avoidance agreement is between the industry and the  
5 community and their representative. So it's not something  
6 that the U.S. government has any role to play. So we  
7 cannot dictate who handles that. That is for the tribes  
8 to discuss with the Alaska Eskimo Whaling Commission or  
9 with whoever wants it. That's an internal discussion that  
10 you folks have to have, not us. What we have is we have a  
11 requirement -- and I've told this in the communities that  
12 we have visited. We have a requirement for the industry  
13 to provide us with their plan of cooperation which in the  
14 past has been when they plan to meet with each of the  
15 communities on the issue of what they are doing.

16 We are expanding that now because we have felt that  
17 it becomes more of a checked box on their to-do list, and  
18 we want them now to respond back to us in reports that  
19 says what did you accomplish. Okay. You went to Nuiqsut  
20 or you went to Kaktovik. What did you discuss? What were  
21 the results? What was the concerns of the community? So  
22 it's going to be more than just a date and a location. So  
23 that's the role that the federal government can play, but  
24 the conflict avoidance agreement still remains a  
25 community -- a community concern.



1 MS. MARTHA IPALOOK FALK: I understand  
2 that, but I wanted to say that for the record, that, you  
3 know, the whaling captains association represents their  
4 organization when all of the people are being impacted by  
5 the decision that the government is going to make in  
6 regards to the open water seismic activities.

7 MR. HOLLINGSHEAD: Thank you very much.

8 MR. THOMAS BROWER, III: Good evening. My  
9 name is Thomas Brower, III. I'm an ICAS staff member.  
10 This morning we had a good discussion with Albert Barros  
11 and Ken this morning, along with the ICAS staff, along  
12 with three other villages coming in to teleconference for  
13 this public hearing process. Due to the inability of the  
14 three villages to come in this morning, they made -- one  
15 of the villages requested that we record their comments,  
16 that we are going to put it all together in a letter form  
17 to submit to MMS on a public comment period based on this  
18 draft EIS. And there is discrepancies or lack of data in  
19 that EIS. And it was brought up.

20 Only thing they talk about, two marine mammals. And  
21 there are 46 species of birds come up here every spring,  
22 which is the alternate run in a migratory pattern, which  
23 is a yearly pattern. They are molting, nesting, and  
24 traveling on the shore ice in the coastal villages when  
25 they go back on the migration pattern. And there is a

1     number, at least 12 species, of fish not even discussed on  
2     the EIS, which the only thing it discusses is the bowhead  
3     whale and beluga.

4             So what's a -- where is the protection measures of  
5     the other natural resources which the bowhead relies on,  
6     the krill, plankton? And while the bowhead comes up, it  
7     migrates to deep waters, these Arctic waters, every year.  
8     When they go back down south, they're not eating for seven  
9     months at least, so they come up here to go feed. And in  
10    the event there is either a technologic (sic) impact to  
11    the natural resources, what are we going to do about it?  
12    What is MMS going to do about it? And what is our effects  
13    going to be as Natives in this region who heavily rely on  
14    these Arctic waters and marine mammals and its natural  
15    resources? It's our very existence of our life, what we  
16    depend on other than in the Western world, which is --  
17    what did they do to us in settling the nation? They still  
18    unclaim, whether we know it directly or indirectly, but  
19    it's still an ongoing process.

20            But another problem is the draft EIS doesn't even  
21    speak of the polar bear protection measures. There is no  
22    mention of the polar bear protection measures. There is  
23    an International Treaty Act to protect the polar bear.  
24    Natives are the only ones that can harvest a polar bear.  
25    NMFS couldn't allow incidental take or harassment of polar

1 bears. In the International Treaty Act it doesn't state  
2 that there is -- that White Man can do this. It's against  
3 the law for harassment or incidental take of polar bear.  
4 It's in the international treaty.

5 And this summer -- or this winter there was an ICC  
6 meeting here in Barrow, the Inupiat Circumpolar  
7 Conference. And yet that body, which consists of five  
8 countries, created a resolution to protect our Arctic  
9 waters. Where is it? Is MMS going to take it into  
10 consideration to protect our Arctic waters by the five  
11 international countries: Canada, Greenland, Alaska,  
12 Siberia, Russia? They all signed a resolution to protect  
13 the Arctic region, and it's not resources of the offshore  
14 oil and gas activities. There is no mention of that.

15 So there is also another thing. There's a lack of  
16 data in that EIS which needs to be considered to support  
17 George Olemaun's request for extension of the public  
18 hearing process. And there is other measures.

19 Another lack of data in that EIS is the human health  
20 social impact. There is no studies on any of that. They  
21 should have been done. That's been absent from 1976 to  
22 date. Still nothing in that draft EIS on human health  
23 social impacts on these activities. Our Elders are the  
24 ones that have felt it. Now after 30 years later, I'm in  
25 that situation where we are starting to feel it. Thirty

1 years and we are still going, still battling the offshore  
2 activities which -- several years ago I was in my early  
3 20s. I didn't know it; my Elders were taking care of all  
4 the issues. Now they are gone, I'm in their driver's  
5 seat. I'm in the driver's seat. We are in the driver's  
6 seat. So we -- this issue is passed off 30 years later to  
7 the new generation.

8 So thank you. We will submit our written comments,  
9 have somebody type our recorded meeting we had this  
10 morning. Thank you.

11 MR. HOLLINGSHEAD: Thank you, Thomas.  
12 Additional comments?

13 MR. GEORGE OLEMAUN: This being your last  
14 meeting, as you stated, to the EIS or, as we requested  
15 another 30 or -- 30-day extension of the deadline, will  
16 that be considered or will that be -- I don't know if it's  
17 up to you or it's up to your superiors.

18 MR. KEN HOLLINGSHEAD: I'm going to have  
19 to take that back to discuss it with my supervisors and  
20 our NEPA people and my attorneys. What the National  
21 Marine Fisheries Service and Minerals Management Service  
22 had earlier proposed was that we proceed with the  
23 environmental impact statement. We need to take back  
24 comments such as the ones -- ones that -- requesting an  
25 extension of the comment period and to see what the

1        ramifications would be, what the issues would be, what the  
2        new schedules would be, that kind of stuff.

3                        MS. LAYLA HUGHES:    I think just -- I want  
4        to just advise you in considering what the ramifications  
5        to the schedule would be, it's also really important to  
6        consider what the environmental justice ramifications of  
7        not delaying the hearing by 30 days would be.    It's, I  
8        think, kind of offensive to hold a meeting about impacts  
9        to a people who are going to be impacted and they are out  
10       there doing the thing that's going to impact them.    I  
11       mean, the whole thing is just absurd, in my opinion, and  
12       it clearly flies in the face of environmental justice  
13       considerations.

14                      MR. KEN HOLLINGSHEAD:    Okay.    Thank you.

15                      MR. GEORGE OLEMAUN:    One more thing.    We  
16        have discussed -- we have had a meeting, previous meetings  
17        on -- not so much on this, but with our people here about  
18        moratorium.    Now, how that entails or what would that --  
19        the process or -- that's something, again, I understand is  
20        not up to MMS.    It's up to the Congress.    I don't know.  
21        I'm just asking.    Is that something that can or could be  
22        done, or is that something that we as a body or us here do  
23        need to go through the process to obtain moratorium until  
24        such studies as we have discussed here are done?

25                      MR. KEN HOLLINGSHEAD:    I'm not qualified

1 to answer that comment because that's not my agency.

2 MR. GEORGE OLEMAUN: That's why I'm asking  
3 you.

4 MR. KEN HOLLINGSHEAD: I don't know.

5 MR. PERALES: Everybody around here calls  
6 me Chico, but -- I'm not from here, but I was fascinated,  
7 and I have a lot of friends that are from here, and they  
8 live here and they were born here and they work here. And  
9 so I wanted to come and observe. And I just want to  
10 comment a little bit on my observations.

11 And number one, I think that it's quite obvious that  
12 people -- there is not one person in here that is for the,  
13 you know, the seismic noise out there. The other thing,  
14 and the most important thing I see, is that I almost feel  
15 like I'm witnessing people from here begging for their own  
16 existence and having to depend on people that have no idea  
17 or don't live over here to almost beg for that. And I  
18 think it's quite sad because listening to some of the  
19 eloquent and passionate talks and comments, it's quite  
20 obvious that people see an ominous future for them. And  
21 actually, I feel like I'm witnessing something that once  
22 the wheels get rolling are not going to be able to get  
23 back on track.

24 And you know, maybe it's going to be the -- it's  
25 termination of a cultural way of life. I truly feel like

1       that's what I'm witnessing here, and it's really quite  
2       sad. So that's what I wanted to say.

3                       MR. KEN HOLLINGSHEAD: Thank you.

4                       MR. CRAIG GEORGE: Just a small point to  
5       follow up on the point I made earlier about the difference  
6       between reactions of feeding and migrating whales and  
7       deflection distances. And obviously -- well, maybe  
8       ironically, the animals that are deflected during  
9       migration or actually avoid noise are probably less at  
10      risk than during the feeding periods where they apparently  
11      will tolerate quite high levels and risk perhaps  
12      physiological damage. So anyway, that was sort of a  
13      follow-up to that point that it -- in fact, what we  
14      perceived as a greater effect, that is, these large  
15      deflection distances of migrating whales, may, in fact, be  
16      protecting them.

17              So anyway, I think we need to look a little more  
18      carefully in these areas like in Arctic Canada. And  
19      actually probably the biggest feeding area in the Beaufort  
20      Sea -- well, very likely -- it's a fact that the most  
21      intensive feeding area in the Beaufort Sea is right here  
22      at Point Barrow. It seems to have been a shift over the  
23      last 30 years or so from the eastern U.S. Arctic Beaufort  
24      Sea to the west, or maybe the surveys have -- I don't  
25      know. Increased power has shown that there are higher

1 densities of feeding whales here or whatever.

2 But this is an area where it would be probably really  
3 inappropriate to do any sort of intensive seismic work  
4 northeast of Point Barrow, number one, because it's a  
5 hunting area; but number two, because there are large  
6 aggregations of bowheads. I think they estimated in some  
7 years -- I shouldn't talk off the top of my head like  
8 this, but I recall hundreds of whales on transect in the  
9 MMS surveys. And seeing that many whales on transect is  
10 very unusual, which means there are likely thousands of  
11 bowheads in the area at times. So it's a -- you know, can  
12 be a really significant aggregation.

13 MR. KEN HOLLINGSHEAD: Thank you, Craig.  
14 Additional statements?

15 MS. ROBERTA LEAVITT: I know you have  
16 heard this one before. This is Roberta again. But this  
17 is the heart of our season. We don't have all the  
18 comments that are very much needed for your decision.  
19 Because of the way of life up here, everybody else is  
20 practicing their tradition, which was brought in to them  
21 from their ancestors. Please take into consideration our  
22 hunting times and extend the comment period. I just can't  
23 enforce that more from my heart. As a whaling captain's  
24 wife, my husband cannot be here, but I do want -- I do  
25 want his comments or even other whaling captains' comments



1 to be considered in this issue.

2 And it does not only involve the whale, because I use  
3 the seals. I use the caribou. I use the fish. I use the  
4 birds to feed the community. When we bring that food in,  
5 we give it out to the community. It does not just stay at  
6 my house. I feed -- with one whale I feed the community  
7 four times over: when we get the whale, when we have the  
8 blanket toss, Christmas, and Thanksgiving. That whale  
9 does not just feed one time only. And that whale, it's a  
10 whole year. It feeds a community all year long.

11 Please, please. I can't stress it any more. Please  
12 extend the comment period so that we can get other hunting  
13 families to give their perspective on this final impact  
14 because it is going to impact me. If I can't catch that  
15 whale, then I'm not going to be able to feed the community  
16 that four times. Please. Thank you.

17 MR. KEN HOLLINGSHEAD: Thank you.

18 MR. MONTY ROGERS: For the record, Monty  
19 Rogers. It's my understanding that after the EIS -- this  
20 is completed, this document, that by law you have to have  
21 a 45-day comment period, correct, or no?

22 MR. KEN HOLLINGSHEAD: After -- after a --  
23 a draft environmental impact statement goes out for a  
24 45-day comment period. After that comment period is over,  
25 there is a preparation of a final environmental impact

1 statement. After that final environmental impact  
2 statement, there is a standard cooling-off period during  
3 which time there is another comment period, but there is  
4 that -- those comments become part of the record of  
5 decision but are not responded to similarly to the draft  
6 environmental impact statement.

7 MR. MONTY ROGERS Okay. Thanks.

8 MR. THOMAS BROWER, III: Shell Oil  
9 proposed some activities. For the sake of some listeners  
10 here, if you are not aware, one will be carrying  
11 10,000,000 gallons of diesel fuel. Exxon had 11,000,000.  
12 That was in crude oil. In the event there is a massive  
13 spill within that 10,000,000-gallon tanker, they only came  
14 up with two alternatives to take care of that fuel spill:  
15 one, leave it; two, the first one, continue burning,  
16 providing that all the agencies within the permit approve  
17 the proposal of burning of the diesel fuel.

18 There is no study done what happens to the effects --  
19 after the effects of diesel fuel on top of the water. No  
20 data on that, other than the soot goes down and sinks down  
21 and microorganisms will eat that soot or the burned fuel  
22 that sinks down that we can all see it. Every time we  
23 burn a gallon of diesel fuel, there is a layer of dirt  
24 from the burning that goes down and settles down below the  
25 water.

1 I was pretty alarmed when ACS proposed the other  
2 alternative to do nothing out there and just leave it in  
3 the event if there is a diesel fuel spill. That's very  
4 alarming if MMS does approve these proposed summer  
5 activities for Shell Oil. Very alarming. Thank you.

6 MR. KEN HOLLINGSHEAD: The record remains  
7 open for additional comments. If we are not -- if there  
8 are not additional -- I'm looking at Roberta to see if she  
9 wants to make -- if there are additional interests in  
10 making comments, people just want to think about what they  
11 want to say, we can hold the -- we can continue here. If  
12 everybody that has made who wants to make comments has  
13 made comments, we could close the record and have general  
14 discussion or what have you. Are there additional people  
15 want to make additional statements?

16 MR. KEN GREEN: Who is the Minerals  
17 Management Service? I mean, federal government, but under  
18 who? I mean, are you your own entity? Are you --

19 MR. KEN HOLLINGSHEAD: I'm with the  
20 National Marine Fisheries Service, which is part of NOAA,  
21 which is a subcomponent of the U.S. Department of  
22 Commerce. The Minerals Management Service is a unit under  
23 the U.S. Department of the Interior.

24 MR. KEN GREEN: Okay.

25 MR. KEN HOLLINGSHEAD: So the Minerals

1 Management Service has jurisdiction for offshore leasing,  
2 et cetera. And they permit different offshore --  
3 different activities in the Outer Continental Shelf,  
4 including oil exploration.

5 MR. KEN GREEN: They are the  
6 permitting agency?

7 MR. KEN HOLLINGSHEAD: They have a  
8 permitting responsibility under the Outer Continental  
9 Shelf Lands Act. The National Marine Fisheries Service  
10 has a permitting responsibility under the Marine Mammal  
11 Protection Act. Those permits have some similarity and  
12 some relationship, which is addressed in the environmental  
13 impact statement, including stipulations that MMS has and  
14 different requirements that we have, and so because both  
15 of us have a federal permitting responsibility, the  
16 environmental protection -- actually, the Council for  
17 Environmental Quality wants agencies to work in  
18 cooperation so that they don't have duplication of  
19 activities, duplication of NEPA activities.

20 So, for example, we both -- we join forces to -- as  
21 co-agencies to bring this environmental impact statement  
22 instead of Minerals Management Service drafting an EIS and  
23 National Marine Fisheries Service drafting its own  
24 environmental impact statement. It would have been  
25 preferable if we had had Fish & Wildlife Service joining

1 in, but they chose, at least for this year for this  
2 activity to go on their own under the National  
3 Environmental Policy Act, which is their right to do so.  
4 It's based on funding, interests, all sorts of things  
5 that's in NEPA.

6 MS. LAYLA HUGHES: So I have a question.  
7 I think it's a typo on page 2-10 when you discuss  
8 Alternative 2. And then you have a parenthesis, proposed  
9 action. That can't be right because in this discussion  
10 it's also one of the alternatives that's dismissed. So it  
11 can't be the proposed action, right? Or do I not  
12 understand what you mean by proposed action?

13 MR. KEN HOLLINGSHEAD: What MMS and NMFS  
14 chose was that we chose a proposed action, which is to  
15 issue our respective permits. What you have -- what you  
16 were looking for is what is called the preferred  
17 alternative. And under NEPA you are not required to state  
18 a preferred alternative in the draft EIS, only at the  
19 final EIS stage.

20 MS. LAYLA HUGHES: And so when you -- I  
21 thought it was interesting that you say going by  
22 Alternative 2 would be contrary to the mandates under the  
23 Outer Continental Shelf Lands Act because it requires  
24 operations to be conducted in an environmentally sound  
25 manner. So does that mean that the activity that's been

1 occurring up until now has been in violation of OCSA  
2 because it hasn't included the measures that are suggested  
3 in Alternatives 3 through 9, or what do you mean by that?  
4 Same page, 2-10, first paragraph under alternatives  
5 excluded for further evaluation. It's basically the last  
6 two sentences of the discussion of Alternative 2.

7 MR. KEN HOLLINGSHEAD: I would have to  
8 double-check on that because the -- you know, without  
9 saying more, that may be an error. What has happened in  
10 the past, though, is that there have not been -- MMS's  
11 permits have been issued, but they have not followed what  
12 we have under the Marine Mammal Protection Act. We have  
13 had divergent actions, and what we are doing now is we are  
14 combining these actions into one so that both agencies  
15 would go in lockstep to the extent possible unless  
16 something happens that each agency says it's now no longer  
17 in compliance with some other part of their mandate.

18 But now that we see that there is a need for more  
19 than just the issuance of a permit with the standard --  
20 and Bruce, jump in if you want -- more than just the  
21 stipulations -- the normal stipulations are what Minerals  
22 Management Service follow in issuing the -- their Outer  
23 Continental Shelf Lands Act permits. And what they are  
24 looking at now is what goes in addition to those  
25 stipulations. And they look to National Marine Fisheries

1 Service as having the expertise to provide that additional  
2 level of protection to the marine environment.

3 MS. LAYLA HUGHES: Uh-huh. Well, that's  
4 good.

5 MR. THOMAS BROWER, III: I just got a  
6 question from curiosity. What's the distance from the  
7 coastline to offshore where MMS has jurisdiction; how many  
8 miles offshore?

9 MR. KEN HOLLINGSHEAD: That's three miles.  
10 The State waters and the federally -- federal activities  
11 are controlled either -- inside State waters are  
12 controlled by either the Corps of Engineers or BLM.

13 MR. THOMAS BROWER, III: I'm asking:  
14 What's the distance offshore where MMS has jurisdiction;  
15 how many miles offshore outside of three miles?

16 MR. KEN HOLLINGSHEAD: 200 miles. That's  
17 the 200-mile exclusive economic zone. There are  
18 clarifications. Unless it comes into the territory of  
19 another country, so you would have that -- Canada and you  
20 have Russia and et cetera.

21 Usually when I ask a question, you think of another  
22 one or two more to ask, when I answer something. No? No  
23 other?

24 MR. CRAIG GEORGE: So just for  
25 clarification, once the official public hearing is over,

1       then we will have a question and answer period, is that  
2       right or --

3                       MR. KEN HOLLINGSHEAD: We can close the  
4       record if you have additional comments, yeah. I'm not  
5       sure we need it because we already -- we have a dialogue.  
6       There are some hearing officers that will not respond to  
7       other than technical questions. I don't like -- I don't  
8       run my hearings that way.

9                       MR. CRAIG GEORGE: See if I can articulate  
10      this. But one thing we should get in the record is that  
11      last summer the acoustic models that JASCO did of seismic  
12      sound propagation performed very poorly, as you know.  
13      They were off by at least a factor of two. They predicted  
14      the 120 ensonification zone to be whatever it was, 30  
15      miles and, in fact, it was 80 or 100, or something like  
16      that. And we heard various reasons later why that may or  
17      may not have happened.

18              But I think it's real important if we are going to  
19      make management decisions and predictions about the  
20      effects on marine mammals based on models, that the models  
21      have to work. So there should be an emphasis on refining  
22      them or maybe getting away from them and actually using  
23      empirical data and actually measuring those distances.

24              And one thing in that regard, I remember when we were  
25      doing the acoustic work out here, our acoustic experts



1       were Bill Ellerson and Chris Clark, and they were always  
2       commenting on the low water temperatures really affecting  
3       the speed of sound in water and how wonderful it was for  
4       sound propagation. In this case we were measuring and  
5       locating bowhead whales calling, and we could hear bowhead  
6       whales further than we could locate them. We could hear  
7       them more than 20 kilometers out in the lead system. And  
8       just the physics of the array, we couldn't actually locate  
9       them.

10           Anyway, the point is there seems to be acoustic  
11       properties to the cold oceans and the stratification of  
12       the water and whatever it is that, I guess, sound is going  
13       a lot further than it does elsewhere. So anyway --

14                   MR. KEN HOLLINGSHEAD: I think you are  
15       correct. Thank you, Craig.

16                   MS. ROBERTA LEAVITT: That goes along with  
17       what I was saying about the sound.

18                   MR. CRAIG GEORGE: Yeah, it does.

19                   MS. ROBERTA LEAVITT: Can you tell them,  
20       too, about when the gun goes off way over here and you are  
21       way over there? I know they recorded some of those when  
22       some -- when somebody caught -- when they shot their  
23       shoulder gun, the sound from monument was heard all the  
24       way to where these guys had their -- their microphones out  
25       in the water.

1 MR. CRAIG GEORGE: Right.

2 MS. ROBERTA LEAVITT: And I don't know.

3 You mentioned -- how much distance is that from -- 27  
4 miles, 30 miles?

5 MR. CRAIG GEORGE: It is true when the  
6 ambient noise is low, you can hear people walking on the  
7 ice. You can hear the faintest sounds. And in this case,  
8 whaling activities, what is it, 10 or 12 miles down the  
9 coast, we could pick that up on the hydrophones, as well.  
10 And I'm sure all that's clearly audible to whales. And  
11 yeah, anyway, that's a good point.

12 MS. ROBERTA LEAVITT: And the whales, they  
13 use their tails to guide the younger ones to the open  
14 leads. And you know, that sound, too, might mimic one of  
15 the sounds that the seismic people are using. You might  
16 want to take that into consideration, as well.

17 MR. CRAIG GEORGE: Tail lobbing. It's  
18 very loud. You can hear tail lobbing.

19 MS. LAYLA HUGHES: One more thing. On  
20 page 3-110 in your discussion of potential effects of high  
21 resolution site clearance seismic surveys, the -- I think  
22 the first paragraph is good because it recognizes  
23 potential impacts that, in my understanding, previous NEPA  
24 analyses have not, so I commend you for that. The second  
25 paragraph is straight out of ancient MMS documents and it

1 needs to be updated. And you have better information.  
2 You should instead discuss Shell's -- Shell's information  
3 from its 90-day report where it talks about the -- maybe  
4 Robert can help me with the right words, but about the  
5 sound tests -- you all know what I'm talking about.

6 MR. KEN HOLLINGSHEAD: Yes, I do.

7 MS. LAYLA HUGHES: The sound tests that --

8 MR. ROBERT SUYDAM: Sound source  
9 verification.

10 MS. LAYLA HUGHES: -- Shell did on their  
11 high resolution equipment. And you know, one of the  
12 things that's really bad about this second paragraph  
13 discussing impacts is that -- well, first it's based on a  
14 1985 study. In that study they used a single 40-inch  
15 cubed air gun. And even -- and you know, even if what  
16 Shell used last summer was at the high end, what you  
17 discuss there is not -- does not match your description of  
18 the proposed activity.

19 On page 1-11 and 12 where you say that typically  
20 these source arrays are -- are a single air gun or a  
21 tricluster of air guns, and it's typically 90 to 150  
22 inches cubed. So we know that Shell did the verification  
23 with 280 inches cubed, got an IHA for 270 inches cubed.  
24 That should be squared with why in the proposed action you  
25 were saying it's only 90 to 150, and all of that should be

1 squared with reliance on a study that's based on a 40-inch  
2 cubed gun. It's not a legitimate study to base any  
3 conclusions now about what the potential noise impacts  
4 are. And you can see in Shell's extrapolation the  
5 distances, and they are 20 kilometers, which are  
6 completely different from what's discussed here.

7 MR. KEN HOLLINGSHEAD: One of the problems  
8 with bringing information in from all different areas into  
9 an environmental impact statement is that you do speak in  
10 generalities. And so when you get new specific data, that  
11 data should be incorporated. Of course, the 90-day report  
12 was not available for the draft environmental impact  
13 statement, but it, you know, also recognizes that Shell at  
14 the open water meeting also mentioned that they may drop  
15 down to a 40-cubic-inch air gun for the shallow hazards in  
16 2007. So we need to have -- I need to have discussions  
17 with Shell so that, you know, they don't go larger.

18 We have no problem with them calculating take levels  
19 for an air gun that's larger than what they use, so if  
20 they go from -- they calculate for 280 and use a  
21 270-cubic-inch air gun, presuming that the array  
22 configuration is going to produce the same sound, we don't  
23 have a problem with that; but if somebody comes in and  
24 says we are going to use a 40-cubic-inch air gun and then  
25 they go to 280, then we do have concerns because they have

1        underestimated under normal circumstances the level -- the  
2        estimated impact on marine mammals, the numbers of marine  
3        mammals that could be taken.

4            But the circumstances that we have that we saw last  
5        year, you know, we have not seen that previously. It was  
6        unknown that they would have such a great distance for  
7        that. We suspect there was some sort of surface sound  
8        channeling or something like that that we need to look  
9        into. So we need to look at that, but recognizing that in  
10       an environmental impact statement when it's this thick and  
11       it's supposed to go for many years does not have to be  
12       specific for each action. It speaks in generalities. So  
13       the difference of the small amount in description of it  
14       that it doesn't reflect it does not negate that that  
15       environmental impact statement could not be used for that.

16           That's -- we just put the information in there. If  
17        there is new information that comes in, you don't throw  
18        out the entire final environmental impact statement  
19        because a new piece of information has come in. That  
20        doesn't change the basis for the EIS in the first place.

21                        MS. LAYLA HUGHES: Well, sometimes it  
22        does.

23                        MR. ROBERT SUYDAM: Two follow-up  
24        questions. I assume that the EIS will be updated with  
25        that new information from the 90-day report that Shell

1       presented, is that fair to say?

2                       MR. KEN HOLLINGSHEAD:   That's correct.

3                       MR. ROBERT SUYDAM:   And then, Ken, you  
4       mentioned that NMFS doesn't have a problem when a company  
5       permits something for 240 and then goes smaller than that,  
6       but do you have a problem when companies go from, you  
7       know, a small gun and then ends up using a larger one.  
8       How do you deal with that?

9                       MR. KEN HOLLINGSHEAD:   When a company  
10      changes the air gun size and goes from -- goes the other  
11      way from where we are looking at, it depends on where we  
12      catch that or notice that discrepancy in their  
13      application.  If it's before we go out to the public,  
14      that's corrected by the applicant either in a correction  
15      letter which gets put into the record or they -- if it's  
16      significant, they revise and resubmit their entire  
17      application.

18              If it's detected after the notice is out, then they  
19      are able to comment, put that in as a comment on their --  
20      in their documents.

21                      MR. ROBERT SUYDAM:   So what happens if  
22      they use a bigger gun?  Haven't told you before they use a  
23      bigger gun.  They are only permitted for 240, but end up  
24      using a 280.  That, to me, seems like a violation of the  
25      permits that they receive.  How is that dealt with by

1 agencies?

2 MR. KEN HOLLINGSHEAD: There are a number  
3 of factors that come into play. One is are you going to  
4 have a sound source verification. If they are going to  
5 have a sound source verification test, which is what  
6 happens up here for any new source, then there is not a  
7 real problem. Most cases when they have calculated their  
8 safety zones, they have gone -- they have gone more  
9 conservative than they need to be. Then that safety zone  
10 is recalculated based on the field verification.

11 And if it's larger, if the safety zone is larger,  
12 then they have to accommodate that larger zone. If it's  
13 smaller, then they have the option of keeping the older,  
14 more conservative zone because their observer is already  
15 working in that zone, or they can drop down to the smaller  
16 safety zone. In some cases they keep the more  
17 conservative earlier safety zone.

18 But the other factor that comes into play is, you  
19 know, in most applications they talk about or a similar  
20 configuration. So they don't specifically say that  
21 because if they go with a different vessel or if they go  
22 with a different array style, that could change the  
23 characteristics. So it could go for a larger -- a larger  
24 total size, but because of the size of the individual air  
25 guns or the configuration of those air guns in the

1     subarray -- in most cases we've got little subarrays to  
2     make one big array -- it may not have a difference in  
3     their safety zones or their impact zones or their  
4     calculation zones. And most of the times they run a rough  
5     model, and most of those models don't have a bottom  
6     verification, so it's almost like an infinite depth. Then  
7     they run that and it says this is what we have.

8             We have not had this experience in the Beaufort Sea  
9     because everybody has stayed pretty much the same, but we  
10    do have that when an oceanographic survey vessel may  
11    suddenly have a problem, they shift to another vessel in  
12    the fleet, and it has a different array size. So we have  
13    to be flexible in that.

14            And again, it depends on a number of factors, all of  
15    which have to be taken into account by the person doing --  
16    processing the application.

17            Additional? Okay. It's after 10:00. This session  
18    was scheduled to go till 10:00 or until -- as long as  
19    people wished to. So if there are no final comments or  
20    questions, I want to thank everybody for coming out  
21    tonight. We are taking all of -- we got Roberta. Yes,  
22    Roberta.

23                    MS. ROBERT LEAVITT: How can I obtain a  
24    draft EIS?

25                    MS. CHERYL ROSA: You can borrow -- if you



1       come to the Department of Wildlife Management or call us,  
2       we could figure out a way to get you an electronic copy or  
3       we can let you borrow one of ours.

4 MR. ROBERT SUYDAM: I think we only have  
5 one, so I'm not sure that --

6 MS. CHERYL ROSA: I take that back, then.

7 Sorry.

8 MR. CRAIG GEORGE: We will print it out.

9 MR. KEN HOLLINGSHEAD: There are a number  
10 of copies that we have mailed out to the --

11 MR. GEORGE OLEMAUN: That's what I said  
12 earlier. You mailed them out. We never got them here.

13 MR. KEN HOLLINGSHEAD: We would like to  
14 know what happened to that.

15 MR. CRAIG GEORGE: It's the mail service.

16 MR. CHUCK KEIZER: Charles Keizer,  
17 resident, Barrow Alaska. You can take either, at a small  
18 fee or no fee, depending on the avenue that you use, you  
19 can mail out via priority mail anything using delivery  
20 confirmation and it will tell you when it was delivered.  
21 That way when people say they have not received it, they  
22 can double-check whether they have it, their secretary has  
23 it, or it has not arrived, in which case then you can  
24 either come to me or you can go to your secretary.

25 MR. KEN HOLLINGSHEAD: All of the copies

1       that were mailed to the villages or to the North Slope  
2       were all sent priority mail, but we did not do a return --

3                   MR. CHUCK KEIZER:   If you do delivery  
4       confirmation, you can either, through your own, which the  
5       Borough has, with their vendor that they use for their  
6       postage meter, or you can do click and ship, which is  
7       going to usps.com, it will give you a manifest of what you  
8       mail out with all the delivery confirmation and all of the  
9       addresses, in which case at any time you can go back and  
10      check.  You can also go on-line, usps.com, and you can see  
11      what day it arrived and what day it was picked up.

12                   MR. KEN HOLLINGSHEAD:   Okay.

13                   MR. CHUCK KEIZER:   Or if you use signature  
14      confirmation, you can see who signed for it.

15                   MR. KEN HOLLINGSHEAD:   Okay.  One thing we  
16      have tried to do, because we heard this similar comment at  
17      the villages, is we had almost all post office boxes for  
18      the North Slope, which limited us to the post office.  
19      There was a request by Emma for several copies of the EIS,  
20      and we sent them up by Federal Express.  My contract  
21      person doing this also sent me a copy of the three reports  
22      on the CD.  That was on Tuesday.  And I -- it still has  
23      not come to the hotel here in Barrow.  So a little bit  
24      less sure that the Federal Express is any better than the  
25      post office in getting stuff to the North Slope.

1 MR. ROBERT SUYDAM: It's worse.

2 MS. LEENA ONGLEY: My name is Leena  
3 Ongley, and I just wonder, did you send them out to the  
4 public libraries?

5 MR. KEN HOLLINGSHEAD: They were sent to  
6 the libraries. I don't have my complete mailing list, so  
7 I just have -- what I have is who got them or who we sent  
8 them to. And I was looking for the libraries. And  
9 Barrow -- I'm not seeing one right -- North Slope Borough  
10 School District received one. Is that in Barrow?

11 MS. LEENA ONGLEY: Yeah.

12 MR. KEN HOLLINGSHEAD: The Tuzzy  
13 Consortium Library in Barrow received one. Those were the  
14 two that went up here, in addition to the mayor's office.  
15 Also the mayor's office, Department of Wildlife  
16 Management, North Slope Borough, the Native Village. I  
17 don't -- Native Village of Barrow, the wildlife director,  
18 tribal council President. So we probably had six or seven  
19 or eight copies sent to the North Slope here. Barrow. We  
20 had a lot more going to the North Slope.

21 MR. THOMAS BROWER, III: Is Inupiat  
22 Community of the Arctic Slope on the mailing list?

23 MR. KEN HOLLINGSHEAD: The Inupiat  
24 Community of the Arctic Slope is on the mailing list, and  
25 we did a second mailing to all of the Inupiat -- excuse

1 me -- the ICAS members, to all council members.

2 MS. MARTHA IPALOOK FALK: I haven't  
3 received mine in the mail yet.

4 MR. KEN HOLLINGSHEAD: Our first set was  
5 mailed on March 22nd. And then Albert is looking for --  
6 he sent me -- I think we were already up here, and I put  
7 in a -- I called back to my contracting person to have a  
8 second set come up to -- for ICAS. One minute, Roberta.  
9 Can we get through this one first?

10 MS. ROBERTA LEAVITT: As the whaling  
11 captains are a real big part of this, too, I'm curious why  
12 none of us got any of this information or even were told  
13 that we can go on the website. Can you maybe include the  
14 whaling captains list, a list, because there is -- there  
15 are 63 registered, and just to send them a little letter  
16 saying we have this on this website. You know, we do have  
17 computer capabilities nowadays, and I'm sure --

18 Like me, I want to know. I want to see this. I  
19 don't have access to it as an organization. I'm a  
20 captain's wife, and it really impacts me, and I would like  
21 to see some of this, also, not just the organizations.  
22 The people that are speaking out should be able to see  
23 some of these comments that you are putting in the books  
24 so that we can see that our comments are actually being  
25 weighed upon, you know. We have weight behind our words,

1 I think. I'm hoping.

2 MR. HOLLINGSHEAD: A copy was mailed to  
3 the Barrow Whaling Captains Association. We do not send  
4 it to each individual whaling captain, but we do go the to  
5 the association. We also have the Kaktovik Whaling  
6 Captains Association and there may be others here that I  
7 have not seen.

8 MS. ROBERT LEAVITT: But is it a  
9 possibility to send a little postcard saying that a draft  
10 is available on a website?

11 MR. KEN HOLLINGSHEAD: We tried to do  
12 that, but we were having trouble with our mailing list  
13 from the beginning, and the EIS caught up to that. We had  
14 two jobs we were processing at the same time. One was to  
15 get a postcard out that NOAA has normally that says you  
16 are on our mailing list. If you -- if you want a paper  
17 copy -- we are just going to mail CDs out. If you want a  
18 paper copy, please return this form by April -- March  
19 whatever it was. But that caught up to the other one. So  
20 we put -- so some people got a postcard in with a CD,  
21 although most people on the North Slope got both a CD and  
22 a paper document because we knew that there were -- that  
23 there was, in some cases, limited Internet access and  
24 computer access, so we mailed both up.

25 But in the Lower 48 states, we sent a lot more CDs

1 out with a little postcard that says if you want a paper  
2 copy, please return this, and those half a dozen that we  
3 received, we sent back. We actually got somebody who said  
4 please remove me from your list, which I found quite  
5 interesting. Okay? Thank you, Roberta.

6 Okay. If there are no additional comments, I would  
7 say thank you again, and right now the comment period  
8 closes May 14th, and we will see about extending it.  
9 Thank you. Thank you very much.

10 (Proceedings adjourned at 10:15 p.m.)

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## 1 REPORTER'S CERTIFICATE

2 I, MARY A. VAVRIK, RMR, Notary Public in and for  
3 the State of Alaska do hereby certify:

4 That the foregoing proceedings were taken before  
5 me at the time and place herein set forth; that the  
6 proceedings were reported stenographically by me and later  
7 transcribed under my direction by computer transcription;  
8 that the foregoing is a true record of the proceedings  
9 taken at that time; and that I am not a party to nor have  
10 I any interest in the outcome of the action herein  
11 contained.

12 IN WITNESS WHEREOF, I have hereunto subscribed  
13 my hand and affixed my seal this \_\_\_\_\_ day of  
14 \_\_\_\_\_ 2007.

15

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\_\_\_\_\_  
MARY A. VAVRIK,

17

Registered Merit Reporter

Notary Public for Alaska

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19 My Commission Expires: November 5, 2008

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